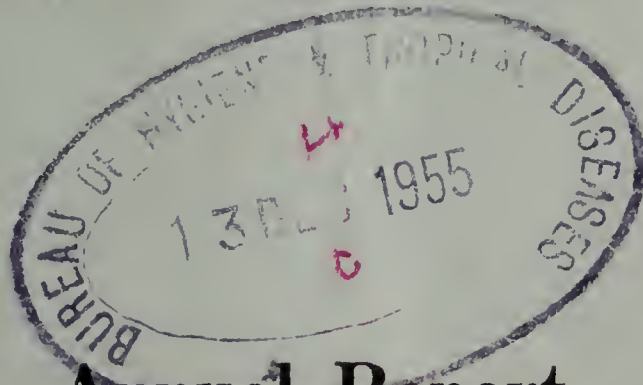


AC. 176



UGANDA PROTECTORATE



Annual Report  
of the  
**Medical Department**

FOR THE YEAR ENDED 31ST DECEMBER, 1954

Price: Shs. 2/75

*Published by Command of His Excellency the Governor*



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Medical Department

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# UGANDA PROTECTORATE

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## MEDICAL DEPARTMENT

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### *Annual Report*

*For the year ended 31st December, 1954*

#### I.—GENERAL REVIEW

There were no major outbreaks of disease during the past year and in various sections of this report encouraging evidence of progress in a variety of fields is recorded. In particular, the work of leprosy control has been developed in several districts; the application of the health requirements for employees has improved, and health education is beginning to play a significant part in progress. Child welfare work has taken a step forward, and voluntary societies are playing an increasing part in this type of work. The question of relaxing the standards of building to permit lower cost housing in specified areas to which the Building Rules apply has been under discussion and may be important in preventing the appearance or increase of the peri-urban slums with their menace to health and morality.

The completion of the Queen Elizabeth Hostel for Nurses, Midwives and Pupils was a welcome advance and not only will it commemorate Her Majesty's visit to Uganda in 1954, but it may be an important factor in attracting more girls for training as nurses and midwives. Expansion of training facilities has been carried out at Masaka, Jinja and Mbarara, and the effect of this will begin to be felt in two years' time. The output of medical officers from Makerere College will not increase significantly before 1960 and it is clear that in the next few years the medical service will depend to a large extent on the recruitment of doctors from overseas.

The transfer of rural medical and health work to the Buganda Government could not be undertaken as originally planned, but the Medical Store at Mengo was built and stocked in readiness for this. In the meantime it is being used as a subsidiary to the Medical Store at Entebbe.

The general staff position has been an uneasy one throughout the year with serious shortages in some categories. At the end of the year there were 14 vacancies for medically qualified staff. Three posts for nursing sisters were vacant with ten having had to be filled by local temporary appointments. Five Makerere doctors entered the service, three as interns: four left the service, one being boarded as medically unfit, and three down-graded to work as laboratory assistants following cancellation of their licences by the Medical Board.

The development of services within a matter of a few decades has been most remarkable but it has been outpaced by the increasing demands made by the public, particularly for curative services. In these circumstances, it is unfortunate that the growing appreciation of European medicine has not been equalled by the realisation that *greater quantity* and a high quality of public medical service necessitates a corresponding increase in financial provision, which in turn depends upon the volume of productive work by the community, and the emergence of sufficient individuals who are willing, anxious and able to play a sustained part in the service. Medical work in particular requires a large number of various categories of trained staff and the pattern of future development will depend very largely upon the number of students coming forward for training and on their sense of vocation after becoming qualified.

The general trend of expansion in medical and health work can be readily followed from a study of the annual published estimates and from a review of previous records. In this way it is of interest to note that in the past ten years the total amount spent on medical work has increased by over three times although it has dropped to about one-half the percentage of the total Protectorate expenditure as allocated a decade ago. The present pressure to which the Medical Department is subjected may be seen from the growth of its medically qualified establishment over the past 30 years in relation to the number of new patients recorded at all units. Thus, in 1923, with 44 medical officers engaged in clinical work, the ratio of doctors to patients receiving attention was 1 to 4,080. By 1933 there were 63 doctors with a ratio of 1 to 11,800. In 1943, 99 doctors gave a ratio of 1 to 14,000 and in 1953 there were 108 doctors with a ratio of 1 to 22,500. In the year under review there were 114 doctors engaged in clinical work and new cases were seen at medical units at the rate of one doctor to 21,459. In the face of this tremendous increase in the demand for medical services, it is clearly impossible for medical officers to give close personal attention to each patient attending a medical unit. It is not surprising, therefore, that a certain amount of criticism has been encountered, particularly from members of the community whose attitude to medical services is primarily subjective.

Though curative services are important and exceedingly popular, it is beyond question that the more lasting improvements in health have been due to preventive measures and these continue to be carried out over as wide a field as is possible. The two broad aspects of this department's work are closely inter-related and should not be widely separated. It is only slowly, however, that in the absence of epidemic disease, the man "in the street" or "in the shamba" appreciates the real value of the less dramatic approach of public health workers, particularly as the application of health measures on a personal or domestic level demand individual effort.

In view of widespread lack of appreciation of the factors concerning medical economics and the manpower required for further advances on a scale which, though highly desirable, may be impossible in the near future, a year of steady progress ended with the department requesting Government to consider the appointment of a committee of enquiry to study the development of medical



and health work and to make recommendations for further expansion, having regard to available resources of manpower and finance. It is hoped that this enquiry will be held during 1955.

DISTINGUISHED VISITORS

*United Nations Organisation*

- Mr. K. Borch, United Nations International Children's Emergency Fund (U.N.I.C.E.F.).
- Dr. D. Thomson, World Health Organisation, Tuberculosis Section.
- Dr. C. Egger, World Health Organisation.
- Dr. K. Sinclair Louitit, World Health Organisation.
- Dr. T. A. Austin, C.M.G., World Health Organisation.

*Rockefeller Foundation*

- Dr. W. A. Mackintosh, Director of Public Health Division.
- Dr. J. A. Logan, assigned to the Colonial Office.

*Nuffield Visitors*

- Professor A. Topping, Dean of London School of Hygiene and Tropical Medicine.
- Professor H. J. Seddon, Royal National Orthopaedic Institute.
- Dr. Cicely Williams, London School of Hygiene and Tropical Medicine.

*Ross Institute of Tropical Hygiene*

- Dr. R. Ford Tredre, Public Health.

*London School of Hygiene and Tropical Medicine*

- Dr. P. N. Le Roux, Schistosomiasis.

*East African Malarialogical Unit*

- Dr. D. Bagster Wilson, Director.

*Others*

- Dr. H. Cullumbine, Ministry of Supply, Medical Division.
  - Professor F. R. G. Heaf, Advisor on Tuberculosis to the Colonial Office.
  - Dr. F. Hawking, Tsetse Fly and Trypanosomiasis Committee of Colonial Medical Research Committee.
  - Dr. J. Van Bloomestein
  - Dr. A. G. Fisher
  - Dr. W. A. F. L. Glatthar
  - Dr. Alan Mozley, Imperial Chemical Industries.
  - Dr. Bhandarkar, A.D.M.S., Central Provinces, India.
- Northern Rhodesian Copper Mining Companies. To investigate training of African Nursing Staff.

II.—VITAL STATISTICS

It is not possible to give completely accurate figures for Uganda because the population is not exactly known nor are the annual birth and death rates accurately returned. It is possible, however, to give a broad picture of the present

population structure and to forecast the future trends in very general terms. Information of this kind is of great importance for many reasons, and in particular in its implications with regard to food supplies, services required, and available labour.

Uganda's population is an emerging one: at the time of the 1948 census the child population was 40·9% of the total, whilst the elderly made up only 11·6%. The remainder, men and women in the working and reproductive ages, were only 47·5% of the whole. This means that less than half of the total population have to support more than their own number of dependants.

The overall birth rate is about 42 per 1,000 and the death rate is upward of 20 per thousand of the total population. The natural increase, which is the excess of birth over deaths, is in the nature of one to two per cent per annum, depending on the area. This means that provided these rates do not radically change, the population of Uganda will have increased from 5,500,000 in 1954 to about 11,000,000 by between 1989 and 2024, that is, in some 35 to 70 years.

It is believed that in Uganda some 10 to 15 women in every 100 have no children. This is due to a variety of causes, of which venereal disease is probably one of the most important. The average number of children in each family is about five but this varies in different areas. It seems likely that with improving health services and expanding child welfare schemes, the fertility rate will increase, and the death rate in lower age groups will fall.

The population density in Uganda averages about 62 per square mile, varying from as low as 19 per square mile in the Acholi District to as high as 201 in parts of Kigezi. The population of each of the four provinces is approximately the same.

### A. AFRICAN POPULATION

The mid-year population was estimated to be 5,508,000 on the assumption that the annual rate of increase since the 1948 census has been 2%.

Deaths in hospital were 550 fewer than in 1953, while the total number of hospital in-patients increased by 1,275.

Details of the disease incidence in African patients attending Government Medical Units are given in Appendix VI.

TABLE I  
Health of African Officers

	1951	1952	1953	1954
"L.C.S." Officers .. .. .	1,790	2,050	2,319	2,395
Deaths notified .. .. .	1	2	4	4
Invalided .. .. .	—	3	13	7
Recorded illnesses causing absence from duty ..	214	163	241	405
Recorded days on sick list .. .. .	932	763	1,915	2,202
Recorded number granted sick leave .. .. .	1	3	6	8
<i>Rates—</i>				
Average number off duty daily per 1,000 ..	14	10	23	25
Average duration of absence in days .. .. .	4·4	6·7	8·0	5·4



The causes of death of the officers included in the above table were: —

Male, age unknown—Severe burns sustained in lorry accident.

Male, age unknown—Drowning.

Male, age 38—Motor accident.

Male, age 33—Schistosomiasis.

## B. EUROPEAN POPULATION

The estimated mid-year population was 7,200. Registered births numbered 225 (191 in 1953) and deaths numbered 24 (37 in 1953).

TABLE II  
European Patients Treated at Government Hospitals

	Year	OFFICIAL		NON-OFFICIAL		TOTAL
		Male	Female	Male	Female	
Out-patients .. ..	1952	3,122	2,755	1,133	699	7,709
	1953	3,161	2,831	1,653	1,128	8,773
	1954	2,741	2,434	1,397	928	7,500
In-patients .. ..	1952	306	338	312	186	1,142
	1953	327	484	385	245	1,441
	1954	319	461	348	226	1,354
Deaths .. ..	1952	3	1	4	1	9
	1953	—	1	2	1	4
	1954	5	—	2	1	8

European patients treated at the main centres were: —

	IN-PATIENTS			OUT-PATIENTS		
	1952	1953	1954	1952	1953	1954*
Kampala .. ..	866	1,076	1,066	2,684	2,491	2,162
Entebbe .. ..	63	105	44	1,529	1,499	1,754
Jinja .. ..	137	195	179	1,213	1,654	1,279
Mbale .. ..	73	65	65	538	616	414

\* 1954 figures do not include re-attendances.

TABLE III  
Health of European Officers

	1951	1952	1953	1954
Number on staff list .. ..	983	1,127	1,208	1,281
Average resident .. ..	827	934	1,052	1,085
Deaths .. ..	2	4	1	5
Invalided .. ..	6	6	3	4
Illnesses causing absence from duty .. ..	404	459	408	501
Total days off duty .. ..	2,751	3,251	2,643	2,611
Granted sick leave .. ..	35	54	49	45
<i>Rates—</i>				
Average number off duty daily per 1,000 residents	9	10	7	7
Average duration of absence in days .. ..	6·8	7·1	6·5	5·2

## Comparison of Health of European Officers by Sex

	MALES		FEMALES	
	1953	1954	1953	1954
Number on staff list .. .. .	1,045	1,099	163	182
Average resident .. .. .	902	930	150	155
Deaths .. .. .	1	5	—	—
Invalided .. .. .	2	3	1	1
Illnesses causing absence from duty .. .. .	343	437	65	64
Total days off duty .. .. .	2,141	2,130	502	481
Granted sick leave .. .. .	38	29	11	16
<i>Rates—</i>				
Average number off duty daily per 1,000 residents	7	6	9	9
Average duration of absence in days .. .. .	6.2	4.9	7.7	7.5

The causes of death of the officers included in the above table were: —

Male, aged 52—Hypertensive cardiac failure.

Male, aged 42—Diabetic coma.

Male, aged 41—Killed by lion.

Male, aged 56—Generalized carcinomatosis.

Male, aged 38—Ruptured liver following accident.

### HIGH COMMISSION DEPARTMENTS

43 officers were absent from duty on account of illness for a total of 258 days.

## C. ASIAN POPULATION

The mid-year Asian population as calculated by the East African Statistical Department was 49,700. Registered births numbered 2,852 (2,687 in 1953) and deaths numbered 247 (231 in 1953).

**TABLE IV**  
**Asian Patients Treated at Government Hospitals**

Year	OUT-PATIENTS		TOTAL	IN-PATIENTS		TOTAL
	Male	Female		Male	Female	
1952 .. .. .	8,510	4,445	12,955	896	1,284	2,180
1953 .. .. .	8,767	4,788	13,555	957	1,480	2,437
1954 .. .. .	7,881	4,468	12,349	872	1,434	2,306

Asian patients recorded at the main centres were: —

	IN-PATIENTS			OUT-PATIENTS		
	1952	1953	1954	1952	1953	1954*
Kampala .. .. .	1,261	1,388	1,431	4,158	4,115	3,639
Jinja .. .. .	383	379	236	2,397	1,240	995
Entebbe .. .. .	118	122	63	2,562	2,155	1,795
Masaka .. .. .	167	204	183	142	190	144
Tororo .. .. .	70	129	67	2,326	2,829	1,844
Mbale .. .. .	45	62	39	1,429	1,490	1,233

\* 1954 figures do not include re-attendances.



TABLE V  
Health of Asian Officers

	1951	1952	1953	1954
Number on staff list .. .. .	398	440	326	489
Estimated average resident, including temporary staff .. .. .	600	550	550	700
Deaths .. .. .	1	1	1	1
Invalided .. .. .	—	—	3	2
Illnesses causing absence from duty .. .. .	572	560	662	811
Total days off duty .. .. .	2,504	3,858	2,952	4,250
Granted sick leave .. .. .	10	11	7	10
<i>Rates—</i>				
Average number off duty daily per 1,000 resident	12	19	15	17
Average duration of absence in days .. .. .	4·4	6·9	4·5	5·2

The cause of death of the officer included in the above table was: —  
Male, aged 39—Cerebral haemorrhage.

The causes of invaliding of the officers included in the above table were: —  
Male, aged 40—Chronic rheumatic carditis.  
Male, aged 62—Malignant hypertension.

#### HIGH COMMISSION DEPARTMENTS

426 officers were off duty because of sickness for a total of 2,822 days (542 officers and 3,693 days in 1953).

One officer was invalided: —  
Male, age unknown—Peptic ulcer.

### III.—PUBLIC HEALTH

#### A. GENERAL

Not so very long ago and, indeed, within living memory, war, pestilence and famine were the greatest obstacles in the way of social evolution and human betterment in Uganda. In the last fifty years these perils have been largely overcome; tribal warfare is almost unknown, and major epidemics and famines have become uncommon.

This has permitted time and energy to be increasingly concentrated on the many causes of ill-health whose lack of dramatic appeal may lead to an under-estimation of their real importance. A large number of these causes are preventable, but few can be overcome completely without the active help of the people themselves. Such help requires a degree of understanding which is difficult to engender and may not be sustained in the absence of spectacular outbreaks of illness. A low standard of health is still too readily accepted. Respiratory infections, malaria, bowel diseases, trachoma, tropical ulcers and venereal disease still cause considerable incapacity. As the population of the country expands it will be necessary for individual output to increase if the standard of living is to be improved. Working capacity and health are directly related.

In order to study the health of the population in detail and advise on measures to improve it, certain basic statistical data are necessary. Thus the population must be accurately enumerated, and its age structure and rate of increase must be known. An increasing population requires more food, increased fertility entails the provision of expanded maternity services, and later of additional schools. Accurate figures of the incidence of infectious diseases and their geographical distribution are necessary before control measures can be fully implemented.

In the following sections various important factors affecting the public health are discussed.

## B. FOOD AND NUTRITION

No serious food shortages occurred during the year and no outbreaks of deficiency disease were reported from Government institutions. Investigations which have been carried out indicate that the food yield of the country as a whole is at present sufficient to provide adequate calories for the existing population if it were possible to overcome difficulties of transport and storage, and provided that prices and local food prejudices did not prevent the optimum use of available foods. While calories may be adequate there still appears to be a serious lack of protein in many diets.

Attempts are being made to overcome these difficulties in various ways. Examination of the problems of transport from producer to consumer areas has been undertaken. The production of dehydrated meat in cattle areas would greatly simplify distribution. The storage of foodstuffs such as grain, groundnuts and beans is receiving attention from the Grain Conditioning and Storage Board. The Uganda Fish Marketing Board, which already produces frozen fish at Kasenyi on Lake George, has begun experiments on the production of fish meal. The Game Department has started several fish farms and is stocking dams with fish in various parts of Uganda. A private company has commenced trawling in Lake Victoria and has set up a fish processing plant on Dagusi Island off the Busoga coast.

A large maize crop was produced, and this cereal is being accepted by increasing numbers of Africans as part of their staple diet. Maize treated at the storage and conditioning plant at Jinja has been of satisfactory standard and is widely accepted. Unfortunately the cost of processing—about Shs. 6 per bag—raises the retail price. Unconditioned maize tends to deteriorate rapidly due to its high moisture content and there have been complaints concerning the general quality of the locally milled product.

The special problems of protein deficiency, especially as they affect infants, have been the subject of continued research under the auspices of the Medical Research Council and Makerere College Medical School. In addition, a medical officer has completed a series of field nutrition surveys. His report is in course of preparation.



Departmental officers have submitted reports for the Standing Advisory Committee on Nutrition concerning the general adequacy of local food supplies for Africans, clinical forms of malnutrition, and proteins in African children's diets, and the department is assisting in the working out of a compact diet with good keeping qualities suitable for use by police askaris where local supplies may not be available and cooking impossible. Advice is also being given to the Education Department in connection with an appropriate dietary for Government-assisted boarding schools.

## C. COMMUNICABLE DISEASES

### (1) Arthropod-Borne

#### MALARIA

Rainfall was average except in the north and north-west, where it was heavier than usual in the early part of the year, and in the lacustrine areas of Buganda and Busoga, where it was less than normal towards the end of the year. There was no indication of unusual malarial incidence.

The frequency with which different species of parasite were found in a series of 8,060 positive blood slides from patients of all races in and around Kampala was as follows: —

P. falciparum	...	...	97.7%
P. malariae	...	...	1.7%
P. vivax	...	...	0.5%
P. ovale	...	...	0.1%

In a separate series of 1,200 children under 10 years of age, attending for any cause at the medical out-patient department, Mulago Hospital, blood-slides examined by a pathologist showed that 638 (53.2%) were positive with the following species index: —

P. falciparum	...	...	529 cases.
P. malariae	...	...	53 cases.
P. vivax	...	...	—
P. ovale	...	...	7 cases.
P. falciparum and P. malariae			36 cases.
P. falciparum and P. ovale	...		2 cases.
Unspecified	...	...	11 cases.

The surveys commenced in Buganda by the East African Malaria Unit are proceeding. In the Butolo area, which is typical of the swamp complexes of the western side of Lake Victoria, no vector *anopheles* were caught though there is plenty of water. In the Luwero area, typical of the drier country of western Uganda, large numbers of larvae of *anopheles gambiae* were found in wells and brick pits, and an average of one female *A. gambiae* was caught per house. The parasite rates in children were almost twice as high in the Butolo as in the Luwero area. These investigations are being continued, and the Biology Department of Makerere College is to investigate the ecology of the swamps in the Butolo area.

Mosquito surveys were carried out by the Entomological Division in the townships of Tororo, Mbale and Mbarara and an area in Kigezi was surveyed with regard to resettlement.

A high-spreading oil containing 5% D.D.T. is coming into more general use in routine larval control of large areas of water; sawdust impregnated in this oil has been used effectively for small breeding foci such as hoof prints.

The incidence of malaria in Jinja remained relatively high. The swampy bays in this locality are difficult to control. They will, however, be inundated and become less suitable for mosquito-breeding when the level of Lake Victoria rises behind the new dam. Man-made breeding places also played an important role in the maintenance of infection in the township, and control measures were intensified.

Five Entomological Assistants were in training at the Central Laboratory, Kampala.

#### PLAGUE

Until 1942 plague was common in Uganda. Thereafter the incidence fell until early 1947 after which no further cases were reported until 1952. In that year 12 cases occurred in a small village situated on a ridge on the slopes of Ruwenzori north of Lake Edward, a few miles from the Belgian Congo border.

Early in 1954 eleven cases were detected in a village close to that in which the 1952 outbreak had occurred. The disease was of bubonic type and was preceded by a high rat mortality in the neighbourhood. There were seven deaths.

A further outbreak of pneumonic type occurred in June, 1954, in a village about one mile from that previously infected. There were seven cases, five of whom died. Since July there have been no further cases.

The people in the recently affected areas live in "beehive"-type grass huts, which are ideal for rat breeding. These huts are crowded with people and goats and are also used as food stores. It is probable that domestic rats were infected by field rodents in which plague is believed to be endemic in this area.

Energetic measures are continuing to improve the standard of housing and sanitation, to ensure that food and cotton stores are ratproofed and to eliminate rats from the vicinity of human habitation.

The low living standards of many areas, where the population share their huts with rats, and the presence of endemic foci of plague in the Belgian Congo, emphasize the necessity of maintaining a vigilant attitude, so that plague, if it appears, may be quickly recognised, contained and eliminated.

#### RELAPSING FEVER

In the past, tick-borne relapsing fever occurred mainly along immigrant labour routes. Immigrants travelled on foot and constant dissemination of ticks occurred, with the result that the incidence remained high.



In 1951 a campaign to eradicate *O. moubata* was started by the medical staff in Ankole. Infested houses were treated with benzene hexachloride dusting powder and the people encouraged to buy and use this powder for themselves. The success of this campaign has been amply illustrated by the fall in incidence of relapsing fever which commenced in 1952 and has since been maintained. The following table shows the number of reported cases over the last eight years in Ankole and in neighbouring districts: —

	1947	1948	1949	1950	1951	1952	1953	1954
Ankole .. ..	343	289	327	393	192	47	32	26
Toro .. ..	27	22	24	43	41	16	37	73
Masaka .. ..	167	161	105	170	156	91	70	27

It is hoped that the continued dusting of houses will be effective in further reducing the incidence of this disease. Its eradication will depend also on an improved standard of house construction, and this is particularly important in the thickly populated area of Katwe in the Busongora County of Toro from which an increase in incidence was recorded.

TRYPANOSOMIASIS

There was a decrease in notifications as compared with last year (103 as compared with 134). The majority of cases occurred in the Busoga and Mbale districts of the Eastern Province.

TABLE VI  
Trypanosomiasis Cases Notified

	1950	1951	1952	1953	1954
BUGANDA—					
Mengo District .. ..	27	7	4	4	4
EASTERN PROVINCE—					
Busoga District .. ..	19	3	3	35	39
Mbale District .. ..	14	7	12	62	30
NORTHERN PROVINCE—					
Lango District .. ..	4	9	3	10	—
Acholi District .. ..	2	8	10	4	5
West Nile District .. ..	8	2	6	9	20
WESTERN PROVINCE—					
Bunyoro District .. ..	2	—	—	6	4
Toro District .. ..	2	2	—	4	1
TOTAL CASES .. ..	78	38	48	134	103
TOTAL DEATHS .. ..	6	2	2	—	3

It was believed at one time that the causative organism in this area might be *T. gambiense*, despite the occurrence of *T. rhodesiense* infection in the adjacent parts of Kenya and of Buvuma Island in Mengo District, with both of which there is considerable traffic. Investigations of species are being carried out at

the East African Tsetse and Trypanosomiasis Research Organisation's laboratory at Sukulu in Bukedi District.

The other main focus of infection was in the West Nile District of the Northern Province. Sporadic cases were also reported from Buvuma Island in Mengo and from Acholi, Bunyoro and Teso districts.

## (2) Helminthic Diseases

### DRACONTIASIS

A survey in Madi Sub-district discovered 17 out of 1,098 (1.5%) people examined to be affected with guineaworm. In the adjoining district of Acholi the incidence was noted to be 3 per 1,000 (0.3%) in 1953. This condition remains confined to the north of the Protectorate.

### SCHISTOSOMIASIS

Dr. Alan Mozley, an expert on the control of bilharzia-carrying snails, visited the West Nile, Lango and Toro districts to investigate the bilharzia problem. He reported that a number of places in each district, many of them man-made, were suitable for snail breeding, and considered that with the further development of these areas, bilharzia infestation is likely to spread.

Examination of dams and valley tanks in various localities showed that snails capable of harbouring schistosomes were widespread. Drug therapy remains disappointing and the use of copper-sulphate to kill off snails has not been uniformly successful. New methods of mollusc control are being investigated.

In West Nile District the incidence of *S. mansoni* infection is reported to vary from 100% in parts of Jonam County to 2% in Koboko.

### ONCHOCERCIASIS

Following the treatment of the Nile with D.D.T. in 1952 there was a dramatic reduction in the number of *simulium* flies. During the year they were found to be re-appearing though in small numbers. It is proposed to defer further treatment of the river until the level of the lake has been stabilized, which is expected to take place during 1955.

Experiments on *simulium* control were carried out on a stream in Toro District. Considerable success was obtained by the use of a 12% solution of technical D.D.T. in equal parts of power kerosene and dieseline; one part in 12 million of this cheap preparation was found to be lethal in 30 minutes to all *simulium* larvae over a 17-mile stretch of this river.

Surveys were begun in the Bondo-Arivu area of West Nile District. The identity of *S. naevei* as the local vector has been confirmed and it was noted that this fly is very inactive during the dry season, both with regard to biting and breeding.

For many years the Banyoro have suffered from a disease which they name *kisararu* which causes itching and thickening of the skin. They believe that the



disease is associated with working in the Budongo Forest in the early morning. Some think it is due to water dripping from the trees, some incriminate the early morning mist, whilst others blame working in water. In July one such case was investigated in Hoima hospital and found to be suffering from onchocerciasis.

Following this a preliminary survey of the Budongo Forest area was carried out. Seventy-eight per cent. of the 249 labourers employed by local sawmills showed positive skin biopsies, and from their histories it appears that residence of two to three years in the area is necessary before skin snips become positive. The presence of microfilariae in the skins of three out of every ten children in the area under the age of ten indicates a high density of heavily infected vectors.

Although the Budongo Forest is at an altitude of less than 4,000 feet, the vector proved to be *S. naevai*. The breeding sites are in dense forest and until tracks are cut, precise information cannot be obtained. The only accessible river of appropriate size was found to contain many infested crabs. Investigations continue and control measures are being planned.

A preliminary survey of the breeding sites in the streams draining the Uganda slopes of Mount Elgon was carried out and a survey in Kigezi District in the Western Province revealed a further focus infected with *simulium*.

With the advent of D.D.T. as a means of control, interest in the extent and severity of onchocerciasis has intensified, and a large part of the time of the Entomological Division was devoted to a systematic study of *simulium* and measures for its eradication.

An investigation of the value of antrypol in the treatment of onchocerciasis was carried out in West Nile District. Results indicated that those under treatment require close and skilled supervision as 29 of the 60 patients developed a diffuse papular eruption after receiving an average of 5 gm. of antrypol. Treatment was discontinued in these cases as it was feared that continuance might produce a skin lesion more severe than the original onchocercal dermatitis. No improvement was noted after four months in the eleven cases which showed varying degrees of blindness, and in only two or three cases had the nodules decreased in size. In this period the average number of microfilariae had decreased from 50 to 10 in stained skin smears taken from all 60 patients.

In 18 out of the 30 men and 12 out of the 30 women treated in the above investigation there was some degree of lymphadenopathy and loose groin skin, and in five men and one woman this "hanging groin" was associated with a hernia, five of these being femoral. It has been noted that the incidence of hernia in West Nile District is highest in the areas where onchocerciasis is most common.

#### OTHER FILIARIASIS

In the West Nile District 10% of adult males examined in one area were found to have *W. bancrofti* infection, whilst a similar number of women showed no infection. The source of infection is still uncertain.

### (3) Direct Infections

#### ANTHRAX

Sixty-one cases were notified with one death, compared with 54 cases with three deaths in 1953. Distribution was as follows: —

	1953	1954
WESTERN PROVINCE—		
Kigezi .. .. .	2	2
Toro .. .. .	13	24
Bunyoro .. .. .	34	23
NORTHERN PROVINCE—		
Karamoja .. .. .	2	7
EASTERN PROVINCE—		
Teso .. .. .	2	1
BUGANDA PROVINCE—		
Mengo .. .. .	1	4
TOTAL ..	54	61

Cases occur largely in the west. Some are due to eating the meat of hippo found dead from the disease. Others result from eating the flesh of animals which have been condemned as suffering from anthrax, but where, contrary to instructions, the carcasses have not been destroyed.

There is little doubt that if more attention were paid to the publicity given to the dangers of eating infected meat, the incidence of human anthrax would be significantly reduced.

#### CHICKEN POX

This disease continued to be widely reported, 1,481 cases with no deaths being notified as compared with 1,292 cases in 1953.

#### DIPHThERIA

Only eight cases were notified, none of them fatal. Five occurred in Kampala, one in Jinja, and one each in Busoga and Bunyoro Districts. This compares with 15 cases in 1953, three of which died.

It is noteworthy that at the Central Laboratory, Kampala, eleven virulent strains of diphtheria were isolated during the year, five of them in the month of December.

#### INFECTIVE HEPATITIS

Until recently this condition was rarely reported. Now that it appears to occur more commonly, instruction in its recognition will be given to medical auxiliaries. Cases were reported from several districts, most occurring in Masaka, with 21, and Mubende District with 17 cases. One hundred and thirty-four patients were treated at Government hospitals, with 11 deaths. The main importance of this disease lies in its clinical similarity to yellow fever.



## CEREBRO-SPINAL MENINGITIS

Sixty-one cases with 12 deaths were notified as compared with 148 cases with 33 deaths in 1953. It is doubtful if all were meningococcal infections.

## MEASLES

One thousand one hundred and sixty-five cases were notified with four deaths, compared with 884 cases with no mortality in 1953. The disease was widespread, occurring in all districts save Karamoja. Small epidemics occurred in Entebbe and Jinja.

## MUMPS

Thirty-five cases were notified with no deaths.

## RABIES

Despite the presence of rabies amongst jackals in West Nile District and possibly elsewhere, no human cases have been notified for some years. In areas where there is a possibility that animals may be infected, persons who are suspected of having been exposed to this infection are given a course of anti-rabies vaccine.

## POLIOMYELITIS

Forty-four cases with four deaths were reported, as compared with 45 and three deaths in 1953. The cases were widely scattered. One of the fatal cases was a European adult, the others were Africans. Two other European cases are known to have occurred, one a child from Mbale, the other a schoolboy infected in Kisumu. Three Asian patients were treated in Government hospitals.

The Brunhilde strain was recovered from an African child early in the year and has since been isolated on two further occasions. Arrangements were made with the Virus Research Institute, Entebbe, to send stool specimens to South Africa for typing.

## TUBERCULOSIS

During this year a scheme was started whereby suitable cases of pulmonary tuberculosis were sent from up-country to Mulago Hospital for assessment and initial treatment, returning to their districts to continue treatment there. This has permitted a greater turnover of patients at Mulago and has stimulated interest in the disease in up-country areas. In the past, facilities for effective treatment were so meagre that the majority of cases could not be treated and apart from advice to their relatives to segregate them in separate huts, little could be done. Now, as increasing numbers of patients return to their districts under treatment, more cases are expected to come forward. In order to deal with these patients, it is proposed to build additional accommodation during 1955 with money allocated from the African Development Fund. A medical officer who is at present undergoing post-graduate training in tuberculosis will maintain close liaison with the units treating this disease and will be responsible for co-ordinating tuberculosis investigations and control throughout the Protectorate.

A survey was carried out of two hundred and forty autopsies on patients who showed no sign of active tuberculosis. No casually found positives and no

inadequately examined negatives were included in the series. The incidence of healed pulmonary tuberculosis at all ages by tribal groups, was as follows: —

Tribal Group	Total Cases	Positive for T.B.	% Positive for T.B.
Ganda and other Bantu .. ..	119	51	42·6
Ankole, Kigezi and Ruanda Urundi ..	86	40	46·5
Other tribes .. ..	35	19	57·1
TOTAL ..	240	110	45·6

The incidence in all cases by age was: —

Age in years	Total Cases	Positive for T.B.	% Positive for T.B.
Under 20 .. ..	18	6	33·3
20—29 .. ..	65	26	40·6
30—39 .. ..	59	30	50·8
40—49 .. ..	62	31	50·0
50 and over .. ..	36	17	47·2
TOTAL ..	240	110	45·6

These results are in conformity with previous field surveys in which about half the adult population tested were found to react to the tuberculin test.

The M.R.C. tuberculosis therapy tests were continued at Mulago Hospital. Of 61 cases fully examined bacteriologically none showed the presence of drug-resistant *M. tuberculosis*, and no such resistant organisms were demonstrated in relapsed cases.

#### VENEREAL DISEASE

The standard treatment with Penicillin Aluminium Monostearate (P.A.M.) continued. Single injection treatment of primary and early secondary syphilis and of acute gonorrhoea was reported to be effective in approximately 95% of the cases which have been followed up.

In some districts it was possible to insist that patients brought their wives for examinations, but the uninhibited sexual conduct which prevails in many parts of the country makes contact tracing generally impracticable.

Trials were begun with longer acting penicillin preparations.

Whilst there is no doubt that penicillin therapy has increased the cure rate of patients with syphilis and gonorrhoea, it is doubtful whether the overall incidence of these diseases is being significantly reduced. Venereal disease, no matter where it occurs, is primarily a social problem and until the moral attitude of the population alters, it will continue to be a major cause of ill-health.

#### TROPICAL ULCER

Ulceration of the legs following the infection of scratches and cuts is still a common and serious cause of disability throughout Uganda. Inadequate treat-



ment of such wounds may result in the formation of large suppurating areas which can completely cripple the patient. Chronic ulcers may become malignant and require amputation of the limb.

While the early treatment of cuts and scratches and the maintenance of an adequate state of nutrition are important in preventing this condition, the treatment of established ulcers was until recently a slow and difficult matter requiring admission to hospital. With the provision of improved supplies of penicillin at rural dispensaries more effective treatment is now possible.

In the West Nile District of the Northern Province particular attention has been given to the more modern treatment of ulcers and at seven rural units over 4,000 cases of acute ulcer were treated with penicillin preparations. It is estimated that there may be about 2,000 cases of chronic ulcer in this district and 232 were treated surgically by a team visiting rural centres from Arua. 150 skin grafts were performed in the last five months of the year and during the latter period eight malignant ulcers were seen.

The general results have been gratifying, but sustained propaganda is necessary to emphasise the importance of the prevention of this condition.

#### LEPROSY

The 60th survey of a series begun in 1950 was completed and analysed during the year. The surveys consisted of the examination of every person resident in well defined but widely scattered areas. The incidence range obtained was 0.0%—4%, with an average lepromatous rate of 10% and a child rate of 20%.

The age distribution showed that the heaviest incidence was not in childhood, but after the age of 20. The disease occurred equally among males and females. Climate and population density did not appear to be related to the incidence. The higher values were obtained in the smaller tribal groups such as the Bwamba, Bakonjo, Bachopi, Banyuli and Badama. The evidence suggests that susceptibility is of primary importance and in such people, contact at any age can produce leprosy with the age frequency in a community depending on the age at which the social pattern makes contact more likely. It was not uncommon to find large areas with many tuberculoid patients but not a single lepromatous case. The surveys suggest that tuberculoid cases are infectious. They may be much less infectious than lepromatous cases, but if such cases are mobile they will have greater opportunities of contact with other people.

The surveys provided opportunities to discuss local measures to introduce treatment in the simplest manner. The response has been encouraging and at the end of the year 20 treatment villages were in operation and others were projected. These were built on simple lines and the labour was provided either by communal effort or was paid for by the District Councils. The community development funds at the disposal of the District Teams have been used generously to provide doors, windows, furniture and food in the early stages whilst the farms were being planted.

In 1951 treatment was only available on any large scale at five settlements maintained by missionary societies but subsidised by annual grants from Protectorate Government, District Councils and the British Empire Leprosy Relief Association. The average number of patients resident in the settlements at that time was approximately 2,000 and out-patient treatment was being given at the settlements to about 2,000 more. The result of the efforts by the District Councils has been to increase the total number of lepers under in-patient treatment to more than 3,000: —

Bunyonyi	..	..	..	601
Nyenga	..	..	..	221
Buluba	..	..	..	439
Kuluva	..	..	..	102
Kumi-Ongino	..	..	..	822
A.L.G. villages	..	..	..	1,070
TOTAL				3,255

In addition, out-patient clinics have been opened as pilot schemes, so that including the 2,000 attending settlements, the total number of out-patients registered is now in the region of 4,000.

Treatment villages are preferable to out-patient clinics because they help to guarantee continuity in treatment. It has been found that in the course of a year most out-patients put in only half the attendances possible, whether treatment is given weekly, twice weekly, or fortnightly.

The average incidence appears to be higher in the Eastern Province and about half the cases in Uganda are in that province. Money has been provided for extensions at Buluba and at Ongino. The local governments of Teso, Bukedi and Bugisu have accepted a scheme to provide three villages for their own patients on land at Ongino. The Teso District Council have altered the roads at both the Kumi and Ongino settlements so that they now have greater privacy. It is hoped that Buluba and Kumi will thus be better equipped to play an effective part in leprosy control in this province.

The Education Department granted £18,000 from their part of the African Development Fund to build or improve schools at both mission and local government settlements. The Protectorate Government has set aside £20,000 from the African Development Fund to be spent during 1954 and the next four years to supplement the funds of District Councils and has increased its maintenance grants to the five main settlements by 35%.

The main treatment used has been diamino-diphenyl sulphone by tablet and, in a few cases, sulphetrone. The results have been gratifying but unfortunately patients have a tendency to discharge themselves as soon as they find their lesions disappearing and their general health improving. For this reason the number of those discharged is not mentioned in the report as it would not reflect the value of the treatment given. The major part of the work of leprosy control in Uganda has still to be begun but the outlook is good and progress to date has been reasonably satisfactory.



SMALLPOX

The number of cases notified since 1952 is as follows: —

			Cases	Deaths
1952	..	..	243	4
1953	..	..	341	2
1954	..	..	199	2

The mild epidemic which passed from east to west across the country in 1953 died down in the first three months of 1954, and only nine cases were notified in the last quarter of the year.

Vaccination of contacts, school children and immigrants was continued. In Bunyoro vaccination is eagerly sought after and takes pride of place over all other types of treatment.

TYPHOID

375 cases were recorded with 13 deaths as compared with 763 cases with 100 deaths in 1953. Cases occurred in all districts save Karamoja and most commonly in Mengo (105), Kigezi (85), Masaka (62) and the former Mbale District (34). The cases occurred sporadically, the largest aggregation being in Mengo District in the last quarter of the year when 46 cases were notified.

D. HEALTH EDUCATION

This important subject, which was surveyed at some length in last year's annual report, has continued to progress. The Health Education Section at Medical Headquarters has gained valuable experience in the most suitable means of teaching health subjects. Radio talks, lectures, films and film-strips, flannel graph material and posters are being produced. Several pamphlets are in course of preparation in English and various vernacular languages. The most important of these may be a model health bye-law intended for the guidance of African Local Governments and District Councils which will be explained in simple terms in an illustrated booklet entitled "Village Hygiene".

The officer in charge travelled widely throughout the Protectorate explaining the aims of the section and discussing local needs. He also gave lectures at the Local Government and Community Development Training Centre at Entebbe to parties of Chiefs, Police, Community Development Assistants, newly arrived Government officers and others attending courses there.

Vehicles, film projectors and other apparatus were received from U.N.I.C.E.F. for use in staff training, maternity and child welfare work and general health education.

Offices and workshops are being built at headquarters to house the section and when completed, additional staff will be recruited so that the production of visual aid material can be increased.

## E. MATERNAL AND INFANT WELFARE

### MATERNITY SERVICES

The work of maternity centres and hospitals continued to increase. The number of ante-natal patients reported from mission centres was 41,035 (40,947 in 1953) and the number attending Government centres was 76,366 (75,778 in 1953). Births at mission centres increased from 11,062 in 1953 to 11,789 in 1954; and in Government centres from 15,517 to 15,931.

**TABLE VII**  
**Summary of Maternity Services**  
*(Mission and Government)*

	1949	1950	1951	1952	1953	1954
Maternity beds .. ..	—	1,280	1,286	1,304	1,360	1,392
Ante-natal patients .. ..	98,499	98,472	114,331	113,508	116,635	117,421
Ante-natal total attendances ..	309,811	290,977	314,447	277,176	302,967	304,664
Abortions .. ..	1,532	1,158	1,222	1,432	1,780	1,596
Live births .. ..	18,101	20,433	21,950	22,844	24,962	25,899
Stillbirths .. ..	1,098	1,209	1,387	1,585	1,617	1,821
Infant deaths .. ..	486	496	571	641	684	702
Maternal deaths .. ..	214	215	301	248	266	307

At Mulago Hospital 21 maternal deaths occurred as compared with 33 in 1953. This gives a maternal death rate of 8 per 1,000 in 1954 as against 14 per 1,000 in 1953. None of these women had attended the Mulago ante-natal clinic. Other figures for the obstetric unit at Mulago Hospital are given below: —

	1953	1954
Live births .. ..	1,426	1,623
Stillbirths .. ..	113	145
Born before arrival .. ..	112	106
Total infants .. ..	1,651	1,874
Total deliveries .. ..	—	1,595
Premature delivery .. ..	165	214
Breech delivery .. ..	91	93
Abortion .. ..	270	322
Incomplete abortion .. ..	—	102
Forceps delivery .. ..	90	75
Caesarian section .. ..	91	78
Toxaemia of pregnancy .. ..	19	3
Retained placenta .. ..	4	6
Ruptured uterus .. ..	8	15
Others .. ..	589	380

The infant mortality rate for those born in hospital was 27 per thousand live births, while the mortality rate for infants born before admission to hospital was 160 per thousand. The infant mortality rate for all live born infants was 35 per thousand (44 per thousand in 1953). The high rate amongst children



born outside the hospital is largely due to the number of premature infants brought to Mulago in the hopes that their lives can be saved.

The main causes of death in infants were prematurity (24) and intracranial haemorrhage (16).

The stillbirth rate was 89 per thousand live births as compared with 79 per 1,000 in 1953. In relation to the total of 145 stillbirths, 64% of the mothers had not received ante-natal care. The main causes were obstructed labour due to pelvic abnormalities, and deaths *in utero*, due probably to such maternal infections as syphilis and the high fevers of malaria.

CHILD WELFARE CLINICS

For the last five years a medical officer has been employed in conducting child welfare clinics in the peri-Kampala area. Nine were in operation in 1954. There has been a steady increase in attendance at these clinics as is shown in the following table: —

Year	No. of clinics held	No. of new cases	Re-attendances	TOTAL
1952 ..	292	1,035	3,658	4,693
1953 ..	277	1,203	4,723	5,926
1954 ..	240	1,412	6,307	7,719

Their purpose is to advise mothers on how to rear healthy children. Mothers are encouraged to attend as soon as possible after the birth of their babies and are given instruction on breast and artificial feeding, weaning and general child care. Two double-trained African nurses attended the clinics and were assisted by African women voluntary workers who had undertaken a course in child care run by the Red Cross. Home visiting took place when time and transport were available and is a most valuable adjunct to child welfare work.

Although not primarily intended for sick children, many are found to be suffering from some form of disease. Of the <sup>1412</sup>1,421 who attended in 1954, no less than 1,387 (98%) showed some evidence of ill-health. An analysis of morbidity is given in Table VIII. The five most common complaints in the age period one week to three years were acute respiratory infection, enlarged spleen, umbilical hernia, malarial pyrexia and septic skin lesions.

Whooping cough, chickenpox and measles were more common than in 1953 and “dirt diseases” were most commonly met with in nilotic children. Daraprim was given prophylactically at two clinics in areas where malaria is prevalent and vaccination against smallpox and whooping cough was available.

The investigation of sickle-cell anaemia and of kwashiorkor continued in conjunction with specialist staff at Mulago Hospital and the effect of a daily supplement of 50 mgm. of aureomycin in preventing childhood infection is being studied.



TABLE VIII

## Morbidity at Ten Child Welfare Clinics in Mengo District

CONDITION	AGE INCIDENCE								ALL	
	1 week-1 month		2-6 months		7-12 months		13-24 months		25-36 months	
	No.	%	No.	%	No.	%	No.	%	No.	%
Acute respiratory infection	8	6.9	133	30.4	132	38.0	117	37.4	46	26.0
Enlarged spleen ..	—	—	62	14.3	86	24.8	74	23.6	33	18.6
Umbilical hernia ..	27	23.3	82	18.9	42	12.1	35	11.2	19	10.7
Malarial pyrexia ..	—	—	25	5.8	61	17.6	70	22.4	43	24.3
Septic skin lesions	2	1.7	25	5.7	49	14.1	69	22.0	41	23.2
Underfeeding ..	2	1.7	62	14.3	49	14.1	37	11.8	6	3.4
Anaemia (less than 9 years %)	—	—	30	6.9	51	14.7	41	13.1	18	10.2
Acute diarrhoea or vomiting	—	—	23	5.3	50	14.4	50	16.0	16	9.0
Chronic respiratory infection	—	—	22	5.1	24	6.9	44	14.1	26	14.7
Whooping cough	—	—	16	3.7	25	7.2	38	12.1	20	11.3
Conjunctivitis ..	8	6.9	33	9.6	19	5.5	12	3.8	12	6.8
Otitis media ..	—	—	9	2.1	18	5.2	15	4.8	6	3.4
Scabies ..	—	—	12	2.8	9	2.6	11	3.5	4	2.3
Very dry skin ..	—	—	1	0.2	4	1.2	18	6.1	11	6.2
Measles ..	—	—	2	0.5	7	2.0	9	2.9	17	9.6
Thrush ..	7	6.1	10	2.3	11	3.2	2	0.6	—	—
Umbilical sepsis ..	19	16.4	5	1.5	1	0.3	—	—	1	0.6
Atrophic or cracked skin	—	—	1	0.2	8	2.3	11	3.5	7	4.0
Dental caries ..	—	—	—	—	—	—	5	1.5	13	7.3
Frank kwashiorkor	—	—	—	—	1	0.3	10	3.2	6	3.4
Chronic diarrhoea	—	—	1	0.2	7	2.0	6	1.9	2	1.1
Chickenpox ..	—	—	3	0.7	3	0.9	5	1.6	4	2.3
Sickle cell anaemia	—	—	—	—	4	1.2	2	0.6	4	2.3
Congenital syphilis	—	—	5	1.5	—	—	—	—	—	—
Congenital heart disease	—	—	1	0.2	1	0.3	3	1.0	—	—
Tuberculosis ..	—	—	—	—	1	0.3	—	—	—	—
TOTAL MORBIDITY	73		563		663		686		357	
TOTAL NUMBER OF VISITS	144		1,170		1,107		1,106		715	
TOTAL NUMBER OF CHILDREN	116		434		347		313		177	
									2,342	
									4,242	
									1,387	

Other activities of the medical officer in charge of child welfare clinics included inter-racial courses in child welfare work and meetings at the Mengo Social Centre where plays, talks and "brains-trusts" were staged. A child welfare exhibition was held at which a model home and model nursery school were on view, and nurses demonstrated the bathing of babies and infant feeding. These activities were carried out in conjunction with the local branch of the British Red Cross Society.

Broadcasts were prepared which included plays illustrating the problems of naughtiness in children, weaning, breast feeding, and diarrhoea in small children; talks on infant feeding and child welfare clinics. Two songs about infant feeding were included.

Child welfare clinics were started in various districts and were having the inevitable teething troubles, greatest of which was the tendency of the local population to regard them as sick children's clinics. Assistance at some of these clinics has been given by members of voluntary societies and notable amongst these efforts has been a weekly inter-racial clinic at the African hospital at Entebbe. The difficulty of inculcating a positive health attitude is nowhere more apparent than when trying to make parents realise that a healthy child makes a healthy adult.

#### DEVELOPMENT OF PAEDIATRICS

With the secondment of a medical officer and a nursing sister to Mulago Hospital from the Great Ormond Street Hospital for Sick Children there commenced an association which, it is hoped, will be of great value both to Uganda and to students in Britain.

Amongst the diseases not found, or found only rarely, in Britain are malaria, sickle-cell anaemia, advanced marasmus, congenital syphilis, helminthic diseases, dysentery and certain types of meningitis. It is hoped that experience of these conditions will enable doctors who have been seconded to Uganda to give lectures on tropical paediatrics to students from tropical countries who take their Diploma in Child Health in London.

Certain diseases not often recognised in Uganda were diagnosed more frequently. Such were mongolism, and congenital heart disease. On the other hand, fibrocystic disease and pyloric stenosis have not been encountered nor has chorea.

#### F. SCHOOL HEALTH

Shortage of medical staff precluded the routine examination of school-children but every opportunity was taken by medical and health officers in visiting schools to advise on hygiene and sanitation and to give talks to the children on health subjects.

While great improvements have been noted, certain unsatisfactory conditions remain to be remedied as regards such matters as the adequacy of school premises, dormitories and ancillary buildings. In addition, although food is grown and cooked at some schools and pupils bring a mid-day meal at others, it is doubtful whether the full benefit of education will be obtained until pupils' diets are more generally adequate.



## G. ENVIRONMENTAL HYGIENE

### (1) Housing and Town Planning

Remarkable progress has been made in the development of the larger towns and the pace of the erection of new buildings has been such as would make more than one town almost unrecognisable to anyone revisiting after an interval of even a few years. The general development of district stations also continues steadily though the application of town planning principles can still be enforced only in the major planning areas.

The zoning of townships to allow the erection of buildings to a lower building standard than is at present permitted under the Building Rules is under consideration. Any development of this kind may meet an important need but will require to be carefully controlled.

The peri-Kampala area continued to give rise to anxiety because of the lack of adequate sanitation and the serious overcrowding in primitive accommodation. Until a suitable plan backed by legislation can be implemented, conditions appear to be incapable of improvement and the risk of an explosive outbreak of one of the "dirt spread" diseases is ever present.

In all townships in the Protectorate except in Buganda arrangements were made to review the existing boundaries with a view to rationalising the areas. At present large rural areas included within some townships are unlikely to be required for building and are not easily brought to the standard of sanitation desirable in a town.

### (2) Water Supplies

With the opening of the purification plant at Hoima this year water supplies to the main townships are now adequately treated, except at Arua and Kabale where the installation of plant is proceeding, and at Kitgum, where a water purification plant has been sited and planned. The 4-million gallon storage tank in Kampala is almost completed.

There were over 1,600 boreholes in use throughout the country, most serving rural areas where alternative sources of supply are inadequate. The protection of springs continued as an important part of rural health work and in most districts a clean water supply has become one of the desired amenities. For example, some 300 springs were protected in Kigezi District during the year. In some districts, however, there is a regrettable tendency to expect community development funds to be expended to the exclusion of community effort. Some valley tanks and dams have also been constructed.

### (3) Food Hygiene

#### MEAT

In those townships in which meat inspection is not done by the Veterinary Department, health officers carry out this duty. Where regular slaughtering takes place in rural areas every attempt is made to examine carcasses before sale but at the numerous irregularly used slaughtering places meat inspection is difficult to carry out. Fortunately the majority of Africans prefer their meat well cooked.

Simple slaughtering slabs and butchers' stalls have been constructed in a number of rural areas to plans approved by this department.

#### MILK

When milk is in short supply watering is still common. Attempts to prevent this frequently result in the vendor ceasing to sell any milk whatsoever, but in one township all vendors were required to sell their milk to a central depot where it is tested by lactometer before purchase and this system appears to be satisfactory.

Co-operative effort by cattle owners such as has been steadily increasing in the Kyaggwe County of Mengo District seems to offer a solution by cutting out the middleman with his bicycle, milk-can and the convenient swamp!

### (4) Hotels

In general it is considered that standards improved during the year but there remained considerable variation between one hotel and another. The Hotels Board is considering grading according to the amenities offered.

#### EATING HOUSES

The standard has in general been raised, and in a few places eating house owners have branched out into premises more resembling restaurants attractive to all races.

### (5) Urban Sanitation

The replacement of bucket latrines by septic tanks continued as funds became available and all new Government quarters are provided with the latter where piped sewage disposal is not available. At Jinja the sewage system is being enlarged.

The zone immediately outside the Kampala Municipality continued to be a major health problem. The Buganda Government provided a second refuse loader for this area during the year with a consequent improvement in refuse collection.

### (6) Rural Sanitation

The provision of an approved type of pit latrine for every household remains a primary aim of rural health staff and is gradually being approached in an increasing number of gombololas.



The standards of housing and of kitchens is slowly but steadily improving and one can now recognise the more progressive areas of Uganda from the air by the large number of corrugated iron and tiled roofs. In the more wealthy parts of the country the desire for good European-type housing is rapidly increasing and it appears that skilled bricklayers and carpenters can find plenty of work. In a number of areas saza workshops are producing concrete latrine stances and pre-fabricated doors and windows for sale at subsidised prices.

## H. HEALTH AND WELFARE OF EMPLOYED PERSONS

In June, 1948, a senior medical officer was seconded to the Labour Department to advise the Commissioner on matters relating to the health of labour. With increased industrialisation, this aspect of medical work has assumed greater importance.

In recent years particular emphasis has been placed on raising the living standards of employees. Housing of labour has been greatly improved in many areas and several employers now provide a village type of accommodation which exceeds the minimum standards required by law. The accommodation of employees in urban areas is, however, an increasingly difficult problem. While it will be relieved by the further development of housing estates, and, as at the Ntinda Estate near Kampala, by schemes in which the future owners assist in construction, the pace at which suitable houses can be completed will require to be accelerated if an increase in the number of uncontrolled and insanitary dwellings in peri-urban areas is to be prevented. The proposed relaxation of standards under the present Building Rules, to which reference has already been made, may also assist in this matter.

Efforts have been made to improve further the quality of rations supplied by employers. The general health of immigrant labour has been improved by the greater use of motor transport by which the hardship of the former long journeys on foot has been removed. While this has prevented much of the fatigue and under-nutrition of previous years, there is no doubt that both as regards immigrants from outside Uganda and migrant labourers within the Protectorate, many have very low nutritional reserves when seeking employment. The importance of a mixed ration of good quality cannot be over-stressed if a satisfactory output of physical effort is to be expected.

The flow of immigrants, the majority of whom came into Uganda by the south-west route, was maintained and there was no outbreak of disease even though the numbers involved are large. The danger of the re-introduction of sleeping sickness from Urundi and Tanganyika still exists, though this hazard has been reduced by more rapid passage through infected areas. Chronic and incapacitated sick were returned to Ruanda-Urundi *via* the Merama Hill Dispensary. Their numbers have continued to fall in recent years and only

TABLE IX

Table Showing Number of Malaria, Respiratory Disease, Tropical Ulcer and Injury Cases and Daily Sick Rates per Thousand with the Total Number of New Cases of all Kinds of Sickness and Re-attendances

	Estimated Number Employees	Daily Average Number in Sample	Malaria		Respiratory Disease		Ulcer		Injury		Total New Cases		Total Re-attendances		TOTAL	
			Cases	DSR per 1,000	Cases	DSR per 1,000	Cases	DSR per 1,000	Cases	DSR per 1,000	Cases	DSR per 1,000	Cases	DSR per 1,000	Cases	DSR per 1,000
AGRICULTURE—	—	18,720	14,524	2·15	4,134	0·61	2,351	0·34	4,250	0·63	35,014	5·19	43,903	6·51	78,917	11·60
	—	3,559	5,721	4·46	5,292	4·13	2,512	1·96	3,624	2·83	31,208	24·35	22,415	17·49	53,623	41·84
	—	2,005	3,987	5·52	603	0·83	391	0·54	540	0·74	9,394	13·01	15,303	21·19	24,697	34·20
	—	640	185	0·80	259	1·15	126	0·54	390	1·69	1,738	7·54	4,343	18·84	6,081	26·38
	45,527	24,924	24,417	2·72	10,298	1·14	5,380	0·59	8,804	0·98	77,354	8·62	85,964	9·57	163,318	35·09
MINING ..	7,922	2,832	2,205	2·18	2,376	2·35	791	0·78	3,314	3·29	14,910	14·80	20,433	20·29	35,343	35·09
FACTORIES—	—	1,409	1,051	2·17	3,484	6·86	534	1·05	2,232	4·39	13,427	26·46	5,852	11·53	19,279	37·99
	—	753	462	1·70	275	1·02	248	0·91	641	2·36	3,684	13·58	4,295	15·83	7,979	29·41
	14,814	2,162	1,513	1·94	3,759	4·82	782	1·00	2,873	3·68	17,111	21·97	10,147	13·03	27,258	35·00
CONSTRUCTION ..	45,448	1,589	721	1·26	811	1·39	83	0·14	448	0·78	3,957	6·91	18,953	33·12	22,910	40·04
GRAND TOTAL ..	113,711	31,507	28,856	2·54	17,244	1·52	7,036	0·62	15,439	1·36	113,332	9·99	135,497	11·94	248,829	21·93
ESTIMATED TOTAL EMPLOYEES ..	239,017															

DSR =Daily Sick Rate.



12 were transported in the year under review. This decrease is in part due to the generally improved condition of immigrants, and in part to the reluctance of many to return to their own country. It is probable that the exchange point for repatriated sick will be moved from Merama Hill to a new dispensary at Chitwe in 1955.

No scheduled industrial disease was reported during 1954 and medical facilities at the main centres of employment were regularly inspected. Five such hospitals have full-time resident doctors and twelve other units receive qualified medical supervision by visits once or twice weekly. Many employers provide dispensaries which are staffed by medical auxiliaries of varying standards of training. The lack of trained staff for such units is a major difficulty; the Medical Department absorbs all its own trainees and the staff available to employers is limited to those who have left the Government or mission services or to ex-service personnel.

The expansion of work at the Medical Department training centres will scarcely be sufficient to provide staff for the additional departmental units which are required, and if medical facilities in industry are to expand, consideration may have to be given to the training by industrial concerns of their own medical auxiliaries.

Table IX is reproduced from the report of the Senior Medical Officer (Labour). The figures have for the greater part been supplied by people with little medical training, and the correctness of the diagnoses is in some instances open to doubt. In studying this table it is important to bear this limitation in mind. It would appear, however, that there has been no major change in the disease pattern since 1953 and that the general improvement noted in that year has been maintained. The table is based on the monthly Sickness and Death Returns from twenty employers and covers a working population of 31,500, i.e., some 10% of the total number of employees in the Protectorate.

## I. INTERNATIONAL AND PORT HYGIENE

Of the six quarantinable diseases covered by the International Sanitary Regulations, 1951, there were small outbreaks of smallpox and plague during the year.

### AIR SERVICES

The regular internal air service continued to be used for the transport of sick from up-country.

Entebbe Airport functioned satisfactorily and the *aedes* index remained low throughout the year. Accidents occurred to three small planes, one of which

took off without an occupant whilst being serviced and became a total wreck. There were no casualties.

			Jan	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.
ENTEBBE 1954—														
Inches of rain	..	..	1·1	2·9	5·4	8·9	7·7	2·3	3·3	3·2	0·7	2·5	3·8	6·4
<i>Aedes</i> index	..	..	0·2	0·1	0·2	0·2	0·3	0·5	0·4	0·7	0·2	0·1	0·1	0·1

A total of 2,582 aircraft passed through the airport of which 2,066 were sprayed with insecticide.

The routine to be followed in the event of a crash was reviewed and additional transport and treatment facilities arranged. It is hoped to station an Assistant Health Inspector at the airport in the near future to supervise the spraying of aircraft and to examine international yellow fever and vaccination certificates.

J. HEALTH OF PRISONERS

The average number of prisoners continued to rise, being 4,071 in 1954 as compared with 3,476 in 1953.

TABLE X  
Health Rates for Prisoners

	1949	1950	1951	1952	1953	1954
Death rates per 1,000	7·1	10·1	12·3	7·1	7·8	7·1
Percentage on sick list	1·2	1·3	1·6	2·4	2·3	1·5
Hospital admissions per 1,000	502	507	498	439	486	378

A new female prison was completed at the Central Prison, Luzira. It has a small ward staffed by this department. The water-borne sanitation at Luzira is not yet installed. Fly breeding caused some trouble and 38 cases of typhoid occurred with three deaths. An outbreak of chickenpox resulted in 119 cases.

Of 1,813 prisoners examined specifically for evidence of Vitamin A deficiency in June, only four showed mild signs of the condition, as compared with six in 1953. Loading doses of Vitamin A continued to be given to new prisoners.

Diets at all Protectorate Government prisons were satisfactory and no serious cases of vitamin deficiency occurred.

The Buganda Government Prison at Mengo continued to improve, albeit slowly, and a new prison is being built at Kigo. Reports on native government prisons stated that on the whole accommodation and diet were gradually improving.



TABLE XI

## Causes of Death in Prisoners

Inter- national List No.	Disease	1951	1952	1953	1954	Remarks
A 1	Respiratory tuberculosis ..	8	6	2	2	Jinja 1.
A 2	Tuberculous meningitis ..	—	—	1	2	Arua 1.
A 9	General paralysis ..	—	2	—	3	Gulu 1.
A 10	Other sequelae of syphilis ..	2	—	—	—	
A 12	Typhoid fever ..	—	—	2	3	
A 16	Dysentery ..	—	2	2	1	Jinja.
A 20	Pyæmia ..	—	—	—	1	
A 34	Infective hepatitis ..	—	—	1	—	
A 37	Malaria ..	—	1	—	—	
A 43	Other infective diseases ..	1	—	—	—	
A 47	Carcinoma of rectum ..	—	—	1	—	
A 56	Carcinoma of bone ..	—	—	—	1	
A 57	Malignant neoplasm ..	—	2	1	3	Lira 1.
A 58	Leukaemia ..	1	—	—	—	
A 65	Anaemia ..	1	2	1	—	
A 66	Abscess of spleen ..	1	—	—	—	
A 67	Psychosis ..	2	—	2	—	
A 70	Vascular lesions of C.N.S. ..	—	—	1	—	
A 71	Meningitis ..	—	1	2	—	
A 73	Epilepsy ..	—	—	—	1	Tororo Camp.
A 78	Transverse myelitis ..	1	—	—	—	
A 82	Disease of heart ..	—	—	1	1	Moroto.
A 89	Lobar pneumonia ..	3	1	1	—	
A 90	Broncho pneumonia ..	2	2	—	—	
A 91	Other pneumonia ..	—	1	—	4	Mbale 3, Lira 1.
A 95	Abscess of lung ..	1	—	—	—	
A 100	Ulcer of duodenum ..	1	—	—	—	
A 105	Cirrhosis of liver ..	—	2	—	1	
A 107	Other digestive diseases ..	3	—	3	—	
A 109	Chronic nephritis ..	3	—	—	1	
A 110	Infection of kidney ..	1	1	—	—	
A 136	Senility ..	—	—	1	—	
A 137	Ill defined disease ..	1	—	1	1	Peritonitis.
AN 138	Fracture of skull ..	—	—	—	1	
AN 139	Fracture of spine ..	—	—	1	—	
AN 150	Bullet wound ..	1	—	2	—	
	Crushed chest ..	—	—	1	—	
	Suicide ..	—	2	1	—	
	Haemorrhage and shock ..	—	—	—	3	Kitalya Prison Farm 1
	TOTAL ..	33	25	27	29	Central Prison 17.

## IV.—CURATIVE SERVICES

### A. HOSPITALS

#### STAFF

There is no change from 1953 in the number of establishments staffed by doctors, and the four rural hospitals down-graded in 1952 through lack of African medical officers continue to function as dispensaries.

#### BUILDINGS

The opening of the Queen Elizabeth Hostel for Nurses at Mulago Hospital was perhaps the main event of the year. This comfortable up-to-date building compares favourably with the quarters provided at many hospitals in Britain, and provides accommodation for 350 nurses, midwives and students.

A new general ward was built at Kabale, and at Jinja a new administrative block, operating theatre, ward and recreation hall were completed. The training school for nursing orderlies at Jinja was practically completed, and class-room and dormitory extensions at the Masaka Training School are in process of construction. Work is also in process on a two-storied dispensary in Kampala, out-patient and administrative blocks and operating theatres at Masaka and Soroti, an operating theatre at Kabale, and a health section at Medical Headquarters.

A number of works are projected for 1955. These include the building of an extension to the Central Medical Store and a hostel for trainees, a new Nurses Training School and private ward accommodation at Mulago Hospital, wards at Lira, Fort Portal and Gulu and a Midwives Training School at the last-named. Alterations to the European and Asian Hospital, Kampala, are also planned.

#### MULAGO HOSPITAL

The metabolic ward and laboratory were completed and research on infantile malnutrition by a group of Medical Research Council workers proceeds under Dr. R. F. A. Dean.

The training of midwives was commenced and will be extended in 1955. Improvements were carried out in the out-patient department.

#### NURSES' WELFARE

The nurses reacted very favourably to the move into the new hostel. In these surroundings their standards of cleanliness and tidiness have improved. They are allowed to entertain visitors and may show their relatives round the hostel on receiving special permission. The Nurses' Welfare Officer continued her valuable and arduous work.

Netball and tennis are played and one nurse played netball for Uganda, scoring the winning goal against Kenya in an "international" match. Country dancing is popular under the tuition of ladies from the Toc H Club, and the choir continues to function and has formed a special musical group.



367 books were borrowed from the library compared with 148 in 1953. Good adventure stories were most popular.

Sewing classes, cinema shows, theatricals and dances help to add interest to off-duty periods, and trained staff attend the ladies' Toc H Club and Y.W.C.A. whilst the Ranger company continues to flourish.

It is to be hoped that the increased care and welfare of nurses, and the first-class accommodation provided for them, will encourage parents to allow their daughters to take up one of the most important and satisfying occupations open to women.

#### PATIENTS' WELFARE

The Women's Welfare Officer continued to help patients and their relatives, assisted by an African woman Probation Assistant.

Two hundred and two men, women and children were repatriated to various parts of the Protectorate and to neighbouring territories, and money was given to others for their maintenance and to pay their travelling expenses.

The care of destitutes and of ambulant sick was continued. A new hostel for the latter is being built close to Mulago Hospital and will be run by the Community Development Department.

Care of the chronic sick, the aged, and the homeless is a major problem: the Buganda Government is allocating a sum of money to assist destitute Baganda.

Occupational therapy continued but the lack of voluntary helpers has prevented this work from being extended. Magazines and papers were distributed, and the small library was popular, especially with the T.B. patients.

The women's V.D. Clinic was attended and 630 new patients interviewed, a family history taken, and attempts made to persuade women to bring their contacts to hospital. About 55 contacts are known to have come for treatment. 126 of the women seen were under 16 years of age and 20 were cases of rape, the latter all under the age of nine.

#### PHYSIOTHERAPY

The Mulago Physiotherapy Department treated 1,274 patients. At the European and Asian Hospital, Kampala, 349 Europeans and 101 Asians were given a total of 3,051 treatments.

Plans were prepared for the building of a new physiotherapy department at the European and Asian Hospital.

#### BLOOD TRANSFUSION

The blood transfusion service run from Mulago Hospital by the Red Cross Society was expanded and provided 50 to 60 pints of blood per month. It is

hoped shortly to provide 100 pints, an amount considered sufficient for the present needs of the Kampala hospitals.

Transfusion services are starting in up-country stations. In Teso there were 57 grouped donors, and in Mbale the local organiser is already widely known as the "bleeding" secretary! It is hoped later to make use of trained transfusion assistants employed by the Red Cross to popularise blood donations by patients' friends and relatives, and to act as general welfare workers. All blood will continue to be taken by doctors.

Amongst the African population resistance to the idea of blood transfusion is gradually breaking down.

## B. RURAL MEDICAL SERVICES

A number of dispensaries have been rebuilt or extended during the year. In Kampala a new dispensary is being erected close to the railway station. In Mubende District a new ward was built at Kyannasoke, and in Masaka District at Kyebbe. In the Western Province a ward was built at Kiruhura in Ankole District and the dispensary is being rebuilt at Kikube in Bunyoro District. In the West Nile District of Northern Province the dispensary at Terego is being replaced at Wandi; Anau dispensary is being rebuilt, and extra ward accommodation has been provided at Maracha, whilst in Karamoja District Nabilatuk and Amudat dispensaries are in process of construction.

In some areas difficulty was experienced in persuading African local governments adequately to maintain the units for which they are responsible, and the threat of closure was necessary to obtain action in a few cases where continued use of dilapidated buildings would have endangered the lives of patients.

## MISSIONS

In the West Nile District the Africa Inland Mission's hospital at Kuluva was extended to house a further 40 beds, and the dispensary at Goli is to be equipped with maternity beds. At Hoima in Bunyoro District the Roman Catholic mission has completed a maternity centre but this is not yet open. At the Freda Carr Hospital (C.M.S.) at Ngora in Teso District the maternity centre has been completed.

## ACCOUNTS

The department was given the responsibility of disbursing the sums of money allocated to missions for the strengthening of existing hospital units and by the end of the year £23,245 had been paid out of a total of £134,700.

## C. PATIENTS AND DISEASES TREATED

The returns summarised in the tables below are in the same form as those in the 1953 report, except that re-attendances have not been included as they were incompletely recorded at a number of units.



TABLE XII

## Summary of Units and Beds

## (A) GOVERNMENT AND AFRICAN LOCAL GOVERNMENT INSTITUTIONS

UNITS	Kampala	Rest of Buganda	Eastern Province	Northern Province	Western Province	TOTAL
<i>General Hospitals--</i>						
European .. ..	1	1	2	—	—	4
Asian .. ..	1	2	4	1	2	10
African:						
District .. ..	1	3	4	4	4	16
Rural .. ..	—	2	1	2	1	6
Mental .. ..	1	—	—	—	—	1
Prison .. ..	—	2	—	—	—	2
<i>Dispensaries--</i>						
With beds .. ..	—	29	24	32	34	119
Without beds .. ..	1	2	14	5	8	34
Aid posts .. ..	1	42	12	10	34	99
<i>Maternity Centres--</i>						
At hospitals .. ..	3	5	6	4	5	23
At dispensaries .. ..	—	12	15	—	10	37
Solitary .. ..	—	—	1	—	—	1
<b>BEDS</b>						
For Europeans .. ..	37	3	11	—	1	52
For Asians .. ..	55	13	34	3	9	114
For Africans—						
District hospitals .. ..	624	461	688	332	358	2,505
Rural hospitals .. ..	—	108	30	70	52	218
In other units .. ..	—	355	748	173	442	1,718
For mental patients .. ..	322	—	—	—	—	322
For prisoners .. ..	24	45	—	—	—	69
<b>TOTAL BEDS</b> .. ..	1,062	985	1,511	578	862	4,998
General beds .. ..	553	676	1,261	531	706	3,727
Maternity beds .. ..	87	252	250	47	156	792
Tuberculosis beds .. ..	76	12	—	—	—	88

## (B) MISSION INSTITUTIONS

Hospitals .. ..	2	—	3	1	3	9
Others .. ..	1	18	15	4	3	41
<b>BEDS</b>						
In hospitals .. ..	376	—	117	54	137	684
In other units .. ..	12	335	244	6	—	597
<b>TOTAL BEDS</b> .. ..	388	335	361	60	137	1,281
General beds .. ..	284	68	164	22	117	655
Maternity beds .. ..	104	267	197	38	20	626

## (C) BEDS MAINTAINED BY EMPLOYERS OF LABOUR

In hospitals .. ..	—	130	125	—	160	415
In dispensaries .. ..	—	35	—	—	60	95

TABLE XIII

## Comparative Summary of Patients

## GOVERNMENT AND AFRICAN LOCAL GOVERNMENT UNITS

YEAR	HOSPITALS			DISPEN- SARIES	ALL UNITS
	Admitted	Died	Out- patients	Total patients	Total patients
1951 .. ..	88,025	3,037	775,532	1,587,483	2,451,048
1952 .. ..	80,990	2,967	744,616	1,618,472	2,444,078
1953 .. ..	77,275	2,970	675,491	1,676,406	2,429,172
1954 .. ..	78,332	2,373	669,655	1,698,355	2,446,342

TABLE XIV

## Analysis by Province

	Buganda	Eastern Province	Northern Province	Western Province	TOTAL
IN-PATIENTS—					
Hospital—					
European .. ..	1,120	234	—	—	1,354
Asian .. ..	1,771	433	8	94	2,306
African .. ..	30,274	22,267	12,879	9,252	74,672
All races .. ..	33,165	22,934	12,887	9,346	78,332
Dispensary .. ..	12,967	19,876	7,432	9,897	50,172
TOTAL ADMISSIONS ..	46,132	42,810	20,319	19,243	128,504
OUT-PATIENTS—					
Hospital—					
European .. ..	4,358	2,151	317	674	7,500
Asian .. ..	5,877	5,032	478	962	12,349
African .. ..	248,813	152,940	136,158	111,895	649,806
All races .. ..	259,048	160,123	136,953	113,531	669,655
Dispensary .. ..	359,843	584,980	365,135	338,225	1,648,183
TOTAL OUT-PATIENTS ..	618,891	745,103	502,088	451,756	2,317,838
TOTAL ATTENDANCES ..	665,023	787,913	522,407	470,999	2,446,342
DEATHS—					
Hospital—					
European .. ..	8	—	—	—	8
Asian .. ..	29	9	—	1	39
African .. ..	1,146	561	311	221	2,239
All races .. ..	1,183	570	311	222	2,286
Dispensary .. ..	241	364	216	190	1,011
TOTAL DEATHS ..	1,424	934	527	412	3,297

NOTE.—*Dispensaries* includes aidposts and maternity centres.

*Total Attendances* does not include re-attendances which were incompletely returned and are therefore omitted.



## D. MENTAL HOSPITAL AND MENTAL HEALTH

Despite the greater number of admissions compared with 1953 (401 and 376) the number of deaths dropped from 209 to 80. The high death rate in 1953 was considered to have been influenced by the shortage of matoke when it proved difficult to persuade patients to eat the maizemeal which was offered as an alternative. 237 patients were discharged cured or improved, representing 59% of admissions.

The hospital continued to be grossly overcrowded; the opening of the first part of the new mental hospital at Butabika in 1955 will help to relieve congestion.

Electrical convulsion therapy is still the most rewarding line of treatment, but hypoglycaemic coma has shown good results with the increasing experience of the staff in its use.

Pre-frontal leucotomy was discontinued during the year owing to shortage of surgical and theatre staff, but it is hoped to re-introduce this treatment in 1955 for the most depraved and hopeless cases in which its worth has been proved.

Investigation of the value of Largactil (chlorpromazine hydrochloride) in the treatment of the more violent psychotic conditions was commenced. Results so far are promising.

Cases of general paralysis continue to flow into the hospital. Many run a rapid course and the mortality is high. Now that modern treatment for syphilis is readily available, it is hoped that this late effect may be gradually eliminated as has happened in the United Kingdom.

TABLE XV

### Admissions, Deaths and Discharges : Mental Hospital

YEAR	ADMISSIONS			DEATHS	DISCHARGES
	New	Readmissions	Total		
1950 .. ..	268	27	295	77	131
1951 .. ..	297	34	331	112	191
1952 .. ..	307	27	334	121	222
1953 .. ..	350	26	376	209	205
1954 .. ..	354	47	401	80	237

## E. DENTAL SERVICE

No new units were opened during the year, and difficulty was experienced in maintaining an efficient service as two of the four dental officers were absent for part of the year on leave. Though essential work was carried out, there is little to report regarding dental surveys.

It was noted in the African clinics at Mulago Hospital that large numbers of young Baganda children had carious teeth while the accompanying parent almost always had sound teeth. Examination of entrants to the nurses' preliminary training school showed that the incidence of caries is twice as great

amongst the Baganda as among other tribes. Investigations are being carried out to discover whether Mellanby hypoplasia is a causative factor in dental caries. The increasing consumption of sugar may have repercussions in dental clinics.

A summary of the work carried out is given below: —

	Kampala		Mulago		Jinja		Entebbe	
	1953	1954	1953	1954	1953	1954	1953	1954
Extractions .. ..	858	927	9,604	9,766	380	340	1,156	1,444
Conservative treatment—								
Scalings .. ..	260	379	1,700	1,681	195	210	877	1,125
Fillings .. ..	773	1,120	584	261	698	725	1,529	1,502
Temporary fillings and dressings .. ..	395	652	—	—	62	26	299	402
Crowns, inlays, etc. ..	13	30	—	—	35	15	7	24
Prostheses—								
New dentures .. ..	163	162	—	—	53	87	50	62
Repairs and alterations ..	122	145	—	—	109	44	53	24
Orthodontic appliances ..	45	22	—	—	3	4	21	2
Surgical appliances ..	4	4	13	—	—	—	2	1
TOTAL ATTENDANCES ..	2,818	2,850	14,454	14,207	2,093	2,047	4,176	3,758
Africans .. ..	—	13	14,109	13,944	88	169	729	772
Non-African .. ..	2,818	2,837	345	263	2,005	1,878	3,447	2,986

All up-country stations were visited by the dental surgeons during the year and the volume of work to be undertaken during such tours is steadily increasing.

### F. RADIOLOGICAL SERVICES

The progress of the student radiographers has been hindered by their lack of general knowledge and deficient grounding in elementary school subjects. None of the four students did well at the end of the year examinations, and one of them discontinued the course at his own request.

No further units were equipped with X-ray apparatus during the year. Breakdowns were common and servicing these machines is very difficult.

Six thousand nine hundred and forty-one patients were examined at Mulago Hospital as compared with 6,115 in 1953. Five hundred were referred from mission hospitals (921 in 1953) and 258 from private practitioners (226 in 1953). Two thousand six hundred and fifty-three patients were examined at the European and Asian Hospitals, Kampala, as compared with 2,403 in 1953.

The main classes of examination carried out were: —

Lungs and pleura .. ..	3,049
Lower limbs .. ..	1,163
Upper limbs .. ..	891
Lumbar spine and pelvis ..	525
Miniature films of chests ..	517
Skulls .. ..	163
Heart .. ..	157
Pregnancies .. ..	141
Mandible and teeth .. ..	105



The miniature camera has only been in full use during the last two months of the year. The saving in films was about £90.

### G. PHARMACEUTICAL SERVICES

During the year no further buildings have been erected at the Central Medical Store but inner expanded metal lock-up bays were completed for the storage of antibiotics, and a barbed wire fence was built round the store compound. In 1955 a further store is to be constructed, together with a separate block for inflammable items.

Six-monthly stores indents were delivered to districts by departmental lorries. This has cut down Public Works and rail transport almost to nil. The advantages are manifold. Delivery is now direct from issuing to receiving officer entirely by Medical Department staff, with a consequent saving in time and reduction in the opportunities for theft.

New indent forms for stores were introduced, combining indent, packing and receipt-costing slips in one book in order to reduce paper work and to simplify the completion of the forms by district staff.

There was no serious shortage of drugs and equipment during the year, despite the hold-up of supplies as a result of the strikes in England and at Mombasa. For the first time for many years the six-monthly stores issue was so expeditious that District Medical Officers have written letters of congratulation to the Chief Pharmacist.

The total estimated expenditure in 1954-55 Estimates (including special expenditure) amounts to £242,700 which is almost one quarter of the total Medical Department vote.

During the year the Stores, Drugs and Equipment Advisory Committee continued to consider proposed amendments to the formulary and reviewed the standard equipment lists. By the end of the year a revision of all Medical Forms had been almost completed.

Inspection of records at pharmacies revealed the purchase of cocaine in unusually large quantities and after investigations, three African medical officers in Government service and one private practitioner had their licences removed by the Medical Board for unprofessional conduct: others received warnings.

Visits were paid by Pharmacists to various district stations and the course of training for Assistant Medical Storekeepers was continued.

During the year a 100% check was carried out of the drugs section at Central Stores, when accumulated losses to the value of Shs. 60,000 were discovered. A full check of instruments was in progress at the end of the year. Many "losses" are justly attributable to bad ledger-keeping but this does not account for all discrepancies. Theft in a store of this size is very difficult to prevent, but the introduction of stock cards and the provision of more adequate storage space should go far to simplify the checking of articles in the store and reduce the opportunity for misappropriation.

The manufacturing section of the Central Stores continued its work. A summary of some of the preparations made is shown below:—

Summary of Preparations Manufactured

					1950-52 average	1953	1954
Injections—							
Bismuth oxide	..	..	..	litres	1,066	114	333
Emetine hydrochloride	..	..	..	..	18	—	—
Glucose	..	..	..	..	414	999	2,286
Hydnocarpus oil	..	..	..	..	1,916	767	284
Procain	..	..	..	..	19	17	—
Quinine	..	..	..	..	184	134	173
Sulphathiazole	..	..	..	..	21	6	—
Galenicals—							
Extracts	..	..	..	pints	1,045	207	137
Infusion	..	..	..	..	291	236	532
Linaments	..	..	..	..	4,304	3,168	5,520
Mixtures	..	..	..	lb.	665	480	308
Ointments	..	..	..	pints	14,817	6,979	12,800
Syrups	..	..	..	..	427	—	8
Tinctures	..	..	..	..	3,330	2,906	5,160
Insecticides—							
Benzyl benzoate emulsion	..	..	..	..	239	715	1,046
Bug spray	..	..	..	..	614	—	—
B.H.C. spray	..	..	..	..	50	288	1,700
B.H.C. powder	..	..	..	lb.	139	—	14
D.D.T. spray	..	..	..	pints	5,098	6,656	7,287
Pyrethrum spray	..	..	..	..	1,520	2,880	2,810
Oil of hydnocarpus (external use)	..	..	..	litres	229	247	—
Narcotic preparations	..	..	..	pints	194	284	49

H. AMBULANCES AND TRANSPORT

The replacement of old vehicles continued. Light vans are now standard equipment except in areas such as Karamoja where the terrain is rough and hilly and where two-ton trucks or Land Rovers are used.

The departmental garage remained under the charge of an African mechanic; repairing, painting and servicing of vehicles was undertaken. Two new heavy lorries were purchased for the transport of stores from Entebbe to district stations. One of these will be handed over to the Buganda Government when devolution takes place.

A “Handbook for Drivers” and maintenance charts were printed. It is hoped that they will stimulate interest and increase the efficiency of ambulance and van drivers.

TABLE XVI

					1951	1952	1953	1954
New vehicles purchased	..	..	..	..	7	4	11	14
Old vehicles written off	..	..	..	..	4	12	14	9
Average age of vehicles in years	..	..	..	..	—	—	7	2
Number of ambulances at end of year	..	..	..	..	23	14	10	5
Number of vans and trucks at end of year	..	..	..	..	20	21	22	32
TOTAL number of vehicles at end of year	..	..	..	..	43	35	32	37



African local governments continued to expand their ambulance fleets. In the Eastern Province the rural ambulance service is now almost entirely run by the various local authorities.

## I. REGISTRATION OF PROFESSIONAL PERSONS

A summary of the entries in the various professional registers is given below: —

Register	Number at 31-12-53	Names added in 1954	Names removed in 1954	Number at 31-12-54
Doctors—				
Registered .. ..	178	55*	10	223
Provisionally registered .. ..	4	1	—	5
Licensed .. ..	79	3	29	53
Dentists—				
Registered .. ..	11	2	—	13
Licensed .. ..	2	3	—	5
Under permit .. ..	1	—	—	1
Pharmacists .. ..	19	5	—	24
Midwives—				
C.M.B. standard .. ..	123	20	7	136
Locally trained .. ..	652	48	—	700

\* Includes 24 previously licensed.

Doctors at 31-12-54	REGISTERED				LICENSED			
	Euro- pean	Asian	Afri- can	Total	Euro- pean	Asian	Afri- can	Total
Government .. ..	60	6	21*	87	2	7	22	31
Other public services .. ..	33	—	—	33	—	1	—	1
Mission .. ..	19	—	—	19	—	—	1	1
Private .. ..	10	60	—	70	2	15	3	20
Total in Uganda .. ..	122	66	21	209	4	23	26	53
Not resident in Uganda .. ..	9	5	—	14	—	—	—	—
TOTAL .. ..				223				53

\* Three others were provisionally registered.

## V.—LABORATORY SERVICES

Two buildings at the Central Laboratory were vacated early in the year by the Colonial Insecticide Research Unit and were taken over, one by the entomology section, and the other as a store. A small sheep-pen was added to the animal house.

Plans were prepared for a blood transfusion centre to be built adjacent to the branch laboratory at Mulago.

The disposition of laboratory assistants was: Central Laboratory, 15; European and Asian Hospital, Kampala, 1; Mulago Hospital, 7; and district hospitals, 25. During the year one laboratory assistant resigned to become a gombolola chief and three assistant medical officers joined the staff as Grade I assistants after being deprived of their licences to practise medicine.

Routine work was carried out as summarised below: —

TABLE XVII  
Summary of Work Done in Kampala Laboratories

	1951	1952	1953	1954
Bacteriological .. ..	3,066	3,595	3,475	3,019
Serological .. ..	1,643	1,691	1,885	2,089
Venereal diseases—				
Kahn tests .. ..	31,280	24,482	25,898	23,149
D.G. examinations .. ..	—	—	3,970	3,679
Other tests .. ..	11,850	10,142	11,331	9,086
Haematological .. ..	16,346	20,512	17,518	17,770
Biochemical .. ..	3,543	2,827	2,803	2,096
Blood films for parasites .. ..	27,142	20,412	33,375	25,723
Urine examinations .. ..	4,062	4,400	3,411	6,341
Faeces, microscopical .. ..	7,862	8,214	10,982	8,570
Sputum .. ..	2,780	2,461	2,808	2,803
C.S.F. cytology .. ..	699	793	764	701
Histological blocks .. ..	2,656	2,722	2,215	2,623

Of the Kahn tests 23% were positive, 31% doubtful and 46% negative. 55% of all smears examined for gonorrhoea were positive. These results are similar to those for 1953.

Medico-legal autopsies continued to increase and, in conjunction with the examination of 368 medico-legal exhibits, occupied a disproportionate amount of the time of laboratory staff. This increase is shown in the following table: —

	<i>Autopsies</i>		
1948 .. ..	177		
1949 .. ..	187		
1950 .. ..	250		
1951 .. ..	227		
1952 .. ..	309		
1953 .. ..	272		
1954 .. ..	313		

It is hoped shortly to recruit a medical officer for secondment as police surgeon, whose advent will lighten the burden of the pathologists. It may be mentioned here that the volume of medico-legal work which medical officers are now required to do in the various districts and the time spent in connection with giving evidence in courts, has increased to an extent which seriously affects the range of duties which a limited staff can undertake.

Investigations on sickle-cell disease have included the relation of malarial morbidity to sicklaemia, and the determination of sulphaemoblobin in 96 trait carriers. A survey of 370 sicklaemic adults revealed only one homozygote.

At Mulago much time was spent on the grouping of donors and recipients, and other investigations in connection with blood transfusion, and is summarised below: —

Donors				African	Asian	European
Red Cross donors .. ..				656	33	100
Other donors .. ..				8	88	4
Bottles of donors' blood regrouped .. ..				525	—	4
Recipients						
Grouping .. ..				509	164	383
Cross matching .. ..				528	49	11
Coombs testing .. ..				17	7	56



Though no large-scale investigations have been possible because of insufficient supplies of Rh anti-D serum, results accumulated over several years show that in about 250 tests no example of Rh negative blood has been found in Africans, the one positive case being of mixed ancestry.

In a series of 457 autopsies the presence or absence of peptic ulcers (excluding acute) were recorded in Africans over the age of ten. Ulcers were found to be present in 64 (14%), only four of which had been diagnosed during life. This survey suggests that peptic ulceration is at least as common in the African as amongst the inhabitants in industrialised northern countries. It is commoner in males than females (58 to 6) and more commonly duodenal than gastric (57 to 7). In this series there were significantly more ulcers in south-western immigrants from Ankole, Kigezi and Ruanda Urundi than amongst lacustrine Bantu. More detailed analyses are planned on a larger series.

Other work carried out at the Kampala laboratories is mentioned in the disease section of this report.

## REPORT OF THE GOVERNMENT CHEMIST

The Government Chemist was absent on leave from late August until the end of the year, during which time the Government Chemist, Kenya, kindly undertook the more urgent forensic chemical work. The Assistant Bacteriologist carried out milk examinations, and the Pollution Control Officer of the Labour Department did the remaining work necessary to maintain the service.

### WATER

Fifty-one samples of water were received. Twenty-eight were analysed for their suitability for domestic and boiler use, eighteen were tested on a laboratory scale to determine practicable methods of treatment to make them potable, and five were received from the East African Railways and Harbours Administration in connection with water supply requirements on the Western Uganda Extension.

### FOOD

One hundred and sixty-five samples were examined. They included 80 samples of fresh milk of which 46 were found to contain added water, six samples of tinned milk and one sample of dried milk.

Thirty samples of vegetable oils were examined. Other samples included beers, tinned meats and fish, maize and maize flour, mineral waters, fruit squashes and syrups, tea and bread.

When pure food legislation is enacted this work will undoubtedly expand enormously. It is hoped that a second chemist will be recruited in 1955.

### POISONS

One hundred and thirty-one exhibits were received from 41 cases for the identification of poisons. In only 18 of these cases were poisons found: they included arsenic, bismuth, *cannabis sativa*, cocaine, alcohol and caustic soda.

Other exhibits examined included waragi, body fluids for alcohol, clothing for arsenic and pepper, skin scrapings for mepacrine, native medicines, the identification of various drugs in improper possession and part of a motor car involved in a shooting incident (for the identification of lead). Kerosene was identified in one exhibit from a case of death by burning.

#### MEDICAL

Twenty-six samples and specimens were received including body fluids for the detection of poison, drugs or chemicals for identification, purity or assay.

#### MISCELLANEOUS

Samples examined for the Customs included beers, spirits, rectified spirits, eau-de-cologne, brake fluid and anisette. For the P.W.D. iron oxide, a wooden floor block, deposit from a petrol tank and from an experimental concrete water tank were among the articles examined.

Coins, textiles and mortar were also received for examination.

### VI.—TRAINING SCHOOLS

#### MAKERERE GRADUATES

The three Uganda students who presented themselves for the final medical examination at Makerere College were successful and proceeded to Mulago Hospital to commence their two years internship.

The establishment for Makerere trained doctors in the department was 62. In January, 1954, there were 15 vacancies which increased to 16 by the end of the year. During the year one was re-engaged and one completed his internship; one was boarded out as medically unfit, and three were down-graded to laboratory assistants following cancellation of their licences by the Medical Board. The number of Uganda medical students graduating from Makerere College each year is insufficient to replace losses from resignation, retirement and dismissal, and no significant increase in numbers can be expected in the near future.

Makerere graduates who opted for the new terms of service introduced during the year will no longer be permitted to charge fees for the treatment of African patients, thus bringing them into line with expatriate medical officers.

#### MEDICAL AUXILIARIES

The loss to the department of trained auxiliary staff by resignation, retirement, or dismissal continued to give rise to great anxiety.

With the improvement of educational facilities in the Protectorate, it is proposed that candidates for training as Assistant Health Inspectors, Assistant Medical Storekeepers, Dispensers and Laboratory Assistants should be holders of the Cambridge School Certificate.

Training facilities for male nursing staff were increased during the year by extending the training school at Masaka and building a new school at Jinja.



Commencing in 1955 it is hoped that a total of 70 trainees, all of secondary III standard will be recruited each year. Thirty will go to Masaka and twenty to each Lira and Jinja. At the end of two years training as Nursing Orderlies the best students from all three schools will be sent to Masaka to undergo a third year's training to qualify as Medical Assistants.

The training school for Assistant Health Inspectors at Mbale is also being enlarged. All 16 pupils who entered for the examination for the East African Certificate of the Royal Sanitary Institute were successful. In 1955 a two years course for hygiene orderlies will be recommenced.

With the opening of the Queen Elizabeth Hostel for Nurses at Mulago, the training of midwives, formerly a monopoly of the missions, was commenced. Nine girls were enrolled and this number will be increased to twelve next year. The course is for two years for new entrants and one year for certificated nurses. It is hoped to begin the training of midwives at Gulu in the near future.

An African nurse was awarded a scholarship by the Buganda Government and left for England in December for training in midwifery. She has already had teaching experience and it is hoped that on her return to Uganda she will assist in the training of midwives.

A small hostel is to be built at Entebbe to accommodate trainees. Selected clerk-storekeepers already in the department were given an intensive course of storekeeping at the Central Store during the year. They will form the beginnings of a new cadre of Assistant Medical Storekeepers.

Assistant radiographers and entomological assistants continued to receive instruction at Mulago and the Central Laboratory, Kampala.

It is hoped that the increased output from the various training schools will allow the expansion of services to commence as from 1956.

## LEGISLATION

## DANGEROUS DRUGS ORDINANCE, CAP. 97

Legal Notice 33 removes certain preparations.

Legal Notice 95 adds certain preparations.

## DISTRICT COUNCIL BYE-LAWS

Legal Notice 219: *The Busoga Public Health Bye-law.*

## FACTORIES ORDINANCE No. 5 OF 1952

General Notice 189 exempts certain types of boilers from the requirements of the Ordinance.

General Notice 257: *Amendment to First Aid Order, 1954.*

## MEDICAL PRACTITIONERS AND DENTISTS (AMENDMENT) ORDINANCE—No. 19 OF 1953.

General Notice 90 gives list of registered medical practitioners on 1st January, 1954.

General Notice 91 gives list of registered dentists on 1st January, 1954.

General Notices 93 and 94 give lists of registered midwives on 1st January, 1954.

General Notice 95 gives list of licensed medical practitioners on 1st January, 1954.

General Notice 96 gives list of licensed dentists on 1st January, 1954.

General Notice 97 gives list of provisionally licensed medical practitioners on 1st January, 1954.

## PHARMACY AND POISONS ORDINANCE

General Notice 197 lists persons authorised to give certificates under section 21 (2) (c) of this Ordinance.

General Notice 198 gives list of registered pharmacists on 1st January, 1954.

General Notice 200 exempts hospitals and dispensaries from certain provisions of the Ordinance.

General Notice 201 gives list of registered wholesalers as on 1st January, 1954.

General Notice 202 sets out rules concerning sale of patent medicines.

General Notice 515 gives list of licensed sellers of Part II poisons.

## PUBLIC HEALTH ORDINANCE, CAP. 98

*Building Rules, 1951*

Legal Notices 30 and 112 make amendments to Rules 7 and 17.

Legal Notice 104 defines "plots".

*Eating-House Rules, Vol. VII, p. 1741.*

Legal Notice 146 amends the definition of an eating-house.

*Sale of Milk Rules.*

Legal Notice 35 amends areas to which the Rules apply.

*Drainage and Sanitation Rules.*

Legal Notice 216 makes certain small amendments.



## SCIENTIFIC PAPERS PUBLISHED OR APPROVED FOR PUBLICATION

BOASE, A. J.—“Mooren Ulcer in a Corneal Graft.” *Brit. J. Ophth.*

ELMES, B. G. T.—“Kaposi’s Sarcoma of Lymph Nodes: A Report of Two Cases.” *J. Path. and Bact.* 67 No. 2 of 1954.

ELMES, B. G. T. and MCADAM, I. W. J.—“Helminthic Abscess, a Surgical Complication of Oesophagostomes and Hookworms.” *Ann. Trop. Med.* 48 i 1954.

HOLMES, E. G., STANIER, M. W. and THOMPSON, M. D.—“The Serum Protein Pattern of Africans in Uganda in Relation to Diet and Malaria.” *Trans. Roy. Soc. Trop. Med.*

HUTTON, P. W.—“Severe Onchocercal Dermatoses Responding to Suramin and Diethylcarbamazine.”

JACOB, G. F.—“A Survey for Haemoglobins C and D in Uganda.” *B.M.J.* “The Failure of the Neutrophil Response to Pneumonia in Africans”. *E. Afr. Med. J.* 31-8-46, 1954.

RAPER, A. B.—“Malaria and the Sickling Trait.” *B.M.J.* “Malaria and Sickling (Correspondence).” *B.M.J.* “Peptic Ulcer in Uganda (Correspondence).” *Lancet* 1954 i 1029. “Simple Principles in Diagnosis of Sickle Cell Anaemia.” *E. Afr. Med. J.* 1954 31.443.

RAPER, A. B. and WELBOURN, H. F.—“Sickle Cell Anaemia in Uganda. (Correspondence).” *B.M.J.* i 1440.

SHORE, H.—“Generalized Vaccinia in an African Child.” *E. Afr. Med. J.*

TROWELL, H. G.—“Calorie and Protein Requirements of Adult Male Africans”. *E. Afr. Med. J.* “Recognition of a New Global Disease, Kwashiorkor.” *Scientific American*.

WILLIAMS, A. W., BALL, J. D. and DAVIES, J. N. P.—“Endomyocardial Fibrosis in Africa.” *Trans. Roy. Soc. Trop. Med.*

## APPENDIX III

## SUMMARY OF REVENUE AND EXPENDITURE

	REVENUE		EXPENDITURE			TOTAL
	Charges Raised	Capitation Fees	Personal Emoluments	Other Charges	Special Expenditure	
	£	£	£	£	£	£
1950 .. ..	12,838	4,575	334,478	217,656	9,227	561,361
1951 .. ..	16,607	5,894	422,986	250,029	74,779	747,794
1952 .. ..	28,190	7,073	460,130	370,026	77,826	907,982
1953 .. ..	32,308	7,912	499,472	411,769	50,236	961,477
Holding Budget 1954 ..	19,514	3,438	270,755	180,007	16,726	467,488

N.B.—Casual labour is included under Personal Emoluments for purposes of comparison.

APPENDIX III—*continued*

The figures under 1953 Actual are for a period of one year but the figures for Estimated and Actual 1954 Holding Budget are for a period of six months.

1953	Revenue	1954 Holding Budget	
Actual		Estimated	Actual
£		£	£
14,780	CHARGES FOR SERVICES RENDERED— Medical and dental charges and hospital and X-ray fees .. .. .	8,000	8,980
2,854	SERVICES SUBJECT TO PART REPAYMENT TO OFFICERS— Medical fees: Workmen's Compensation Ordinance	1,000	1,012
14,674	Medical and dental private fees .. .. .	4,400	9,522
32,308	TOTAL REVENUE COLLECTED £	13,400	19,514
7,912	CAPITATION FEE— East African Railways and Harbours .. .. .	2,400	3,029
	Other bodies .. .. .	5	409
2,200	CONTRIBUTIONS FROM AFRICAN LOCAL GOVERNMENTS— Buganda—Medical stores .. .. .	1,100	1,000
	OTHER— East African Railways and Harbours—		
33	Anti-malarial clearings .. .. .	150	138
142	Sleeping sickness clearings .. .. .	70	—
7,350	Other East African Governments for Mulago Teaching Hospital .. .. .	7,500	4,638
40,000	Colonial Development and Welfare Schemes— F.1351 Medical Department .. .. .	20,000	10,000
89,945	£	44,625	38,728
	<b>Expenditure</b>		
468,475	STAFF— Personal emoluments (graded staff) .. .. .	273,838	254,551
30,997	Casual labour .. .. .	18,260	16,204
51,162	Transport of staff and patients .. .. .	26,550	30,780
5,856	Part reimbursement of fees collected by officers from private patients .. .. .	2,400	3,767
619	Workmen's Compensation: Payment to Government medical practitioners .. .. .	500	154
467	Medical and nursing attendance by private practitioners and nurses .. .. .	275	116
537	Special courses of instruction for medical staff .. .. .	600	669
10	Mulago Hospital African staff recreation fund .. .. .	5	—
—	Financial assistance to departmental officers for research .. .. .	250	—
235,395	MATERIALS— Stores, drugs and equipment .. .. .	117,500	84,311
1,868	Transport of stores .. .. .	1,300	1,494
158	Incidentals .. .. .	300	219
380	Publications .. .. .	450	211
64,723	UPKEEP— Maintenance of hospitals, laboratory and training centres .. .. .	38,410	32,880
25,908	Post Office services, water and electricity .. .. .	15,218	15,094
234	Expenses in connection with non-African mental patients .. .. .	250	146
9,614	HYGIENE— Control of epidemic and endemic diseases .. .. .	4,213	2,653
493	Public health propaganda .. .. .	275	258
6,775	CONTRIBUTIONS— Grants to missions for maintenance of training schools for nurses and midwives .. .. .	3,938	3,838
6,870	Grants to missions for relief of leprosy .. .. .	2,825	3,067
500	Grant to C.M.S. Hospital, Kabarole .. .. .	250	250
100	Lady Cook Memorial Scholarships for African nurses and midwives .. .. .	50	50
100	Maintenance of Red Cross van for Blood Transfusion Service .. .. .	50	50



1953	Expenditure—continued	1954 Holding Budget	
Actual		Estimated	Actual
£		£	£
	SPECIAL EXPENDITURE—		
22,024	Equipment for hospitals and dispensaries ..	13,100	4,086
903	Equipment for training schools .. ..	—	544
369	Equipment for training Radiographers .. ..	—	1
220	Equipment, dental, anaesthetic .. ..	—	3
—	X-ray equipment, Mulago .. ..	—	33
—	Office equipment .. ..	635	246
8,846	Purchase of motor vehicles .. ..	2,205	1,435
2,000	Fire protection appliances .. ..	—	45
960	Simulium eradication .. ..	—	819
1,000	Building grants to leper settlements .. ..	500	500
—	New Nursing Sisters quarters (Mbale) equipment	158	—
—	Paediatric Research Scheme .. ..	—	3,000
—	Transfer of Medical Services to Buganda Govern- ment—Purchase of lorry .. ..	—	1,014
10,164	Reserve stocks .. ..	—	—
—	Buluba Leprosy Centre capital grant .. ..	—	5,000
3,750	Building grant: Kumi-Ongino Leprosy Settlement	—	—
£961,477	TOTAL MEDICAL DEPARTMENT £	524,305	467,488
	PUBLIC WORKS DEPARTMENT—		
272,419	New buildings and extensions .. ..	140,968	76,069
5,700	Minor works and maintenance .. ..	—	—
1,255	Maintenance of temporary buildings .. ..	743	601
250	Water supply, Ngora Hospital .. ..	—	—
	TOWNSHIPS AND MUNICIPALITY—		
12,537	Mosquito control .. ..	11,524	7,489
34,866	Kampala Public Health Department .. ..	—	—
	PROVINCIAL ADMINISTRATION—		
1,715	Sleeping sickness inspectors .. ..	990	(990)
13,517	Sleeping sickness clearings .. ..	6,660	5,900
	MISCELLANEOUS—		
—	Passages .. ..	8,000	12,268
3,365	Travelling on leave in East Africa .. ..	2,000	2,331

N.B.—The figures shown as actual expenditure in the Annual Report for 1953 have been revised in the light of more recent information.

## APPENDIX IV

## STAFF

## HONOURS

DR. R. S. F. HENNESSEY ..	Director of Medical Services ..	Companion of the Most Distinguished Order of Saint Michael and Saint George.
DR. H. C. TROWELL ..	Specialist (Physician) ..	Officer of the Most Excellent Order of the British Empire (Civil Division).
MR. E. J. HINES ..	Chief Health Inspector ..	Member of the Most Excellent Order of the British Empire (Civil Division).
DR. V. B. PANDIT ..	Senior Sub-Assistant Surgeon ..	Member of the Most Excellent Order of the British Empire.
DR. A. K. KIBAYA ..	Senior Assistant Medical Officer ..	The Queen's Special Medallion.
MISS K. KABAHUMA ..	Nurse/Midwife ..	The Certificate of Honour.
MR. F. S. SEMPA ..	Medical Assistant ..	The Certificate of Honour.

## POST GRADUATE DIPLOMAS

CHERRY, J. K. T.	..	..	M.D. ( <i>Glasgow</i> ), D.P.H. ( <i>Edin.</i> ) July, 1954.
KEMP, P. D.	..	..	D.P.H. ( <i>Edin.</i> ) July, 1954.
FAIRFUL SMITH, J.	..	..	D.P.H. ( <i>Edin.</i> ) July, 1954.
BLAIKIE, K. W.	..	..	D.T.M. & H. ( <i>Edin.</i> ) February, 1954.

## SENIOR STAFF

Director	..	..	R. S. F. Hennessey, C.M.G., B.A., M.D., F.R.C.P.I., Dip. Bact., D.T.M.&H.
Deputy Director	..	..	J. K. Hunter, M.B., D.T.M.&H., D.P.H.
Assistant Director	..	..	J. M. Caldwell, B.A., M.B., D.P.H., D.T.M.&H.
Medical Superintendent, Mulago Hospital..	..	..	A. A. Alderdice, M.B., M.R.C.P.
Specialists:—			
Physicians	..	..	H. C. Trowell, M.D., F.R.C.P. P. W. Hutton, M.D., M.R.C.P., D.T.M.&H.
Surgeons	..	..	I. W. McAdam, M.B., F.R.C.S. D. P. Burkitt, M.D., F.R.C.S.
Ophthalmologist	..	..	A. J. Boase, O.B.E., F.R.C.S., D.O.M.S.
Radiologist	..	..	<i>Vacant.</i>
Alienist	..	..	G. Campbell Young, M.R.C.S., D.P.H.
Anaesthetist	..	..	H. R. Hudd, B.Sc., M.B., M.R.C.S., D.A.
Leprologist	..	..	J. A. K. Brown, B.Sc., M.D., M.R.C.S., D.T.M.&H.
Gynaecologist	..	..	H. N. Mansfield, M.D., M.R.C.S., M.R.C.O.G.
Senior Pathologist	..	..	A. B. Raper, B.Sc., M.D., M.R.C.P., D.T.M.&H.
Senior Medical Officers	..	..	D. G. Snell, M.B., M.R.C.S., D.P.H., D.T.M.&H. W. Barnetson, M.B., D.T.M.&H. A. F. Fowler, M.R.C.S., D.P.H., D.T.M.&H. R. G. Ladkin, M.B.E., M.A., B.M., D.P.H. J. N. Twohig, M.B., D.P.H.
Entomologist	..	..	G. R. Barnley, M.Sc.
Chief Matron	..	..	Miss M. O. C. Bonthron, S.R.C., S.C.M., R.F.N., Diploma in Nursing.
Chief Pharmacist	..	..	J. C. Baird, M.P.S.
Chief Health Inspector	..	..	V. A. Bunge, M.R.San.I.
Administrative Secretary	..	..	E. J. Kennard.

## APPOINTMENTS AND PROMOTIONS

Caldwell, Dr. J. M.	..	..	Assistant Director	..	..	7- 4-54
			Acting Deputy Director	..	..	28- 6-54— 3-10-54
Twohig, Dr. J. N.	..	..	Senior Medical Officer	..	..	1- 5-53
Ladkin, Dr. R. G., M.B.E.	..	..	Senior Medical Officer	..	..	1- 1-54
Hopwood, Dr. B. E. C.	..	..	Senior Medical Officer	..	..	5-11-54
Baker, Dr. A. M.	..	..	Medical Officer	..	..	3- 6-54
Hamilton, Dr. D. M.	..	..	Medical Officer (Sp. Grade)	..	..	27- 8-54
Luder, Dr. J.	..	..	Medical Officer (Sp. Grade)	..	..	16- 9-54
Powell, Dr. (Mrs.) E. G.	..	..	Medical Officer	..	..	4-11-54
Williams, Dr. (Mrs.) M. A.	..	..	Medical Officer	..	..	28-12-54
Rampal, Dr. N. L.	..	..	Medical Officer (L.C.S.)	..	..	5- 7-54
O'Hare, Miss M. A.	..	..	Nursing Sister	..	..	3- 1-54
Taylor, Miss A. R.	..	..	Nursing Sister	..	..	17- 1-54
Sanderson, Miss M. E.	..	..	Nursing Sister	..	..	31- 1-54
Matthews, Miss D.	..	..	Nursing Sister	..	..	27- 2-54
Robertson, Miss B. S.	..	..	Nursing Sister	..	..	27- 3-54
Moffat, Miss E. A.	..	..	Nursing Sister	..	..	4- 4-54



## APPOINTMENTS AND PROMOTIONS—continued.

Courtney, Miss F. H.	..	Nursing Sister	..	..	24- 4-54
Broadburn, Miss J. V.	..	Nursing Sister	..	..	11- 8-54
Stott, Miss M. M.	..	Nursing Sister	..	..	18- 8-54
Wroe, Miss M.	..	Nursing Sister	..	..	28- 8-54
Corbett, Miss J.	..	Nursing Sister	..	..	31- 8-54
McShane, Miss J. T.	..	Sister Tutor	..	..	6-10-54
Bunge, Mr. V. A.	..	Chief Health Inspector	..	..	1- 8-54
Brookman, Mr. H. R.	..	Health Inspector	..	..	6- 1-54
Smith, Mr. F.	..	Health Inspector	..	..	1- 6-54
Hainsworth, Mr. P.	..	Malaria Field Officer	..	..	1- 1-54
Masterton, Mr. C. P.	..	Pharmacist	..	..	1- 3-54
Lashbrook, Mr. P. J.	..	Storekeeper	..	..	1-10-54
Asea, Dr. S. B.	..	Medical Officer (E.A.)	..	..	1- 1-54
Mohamed Faquir, Dr.	..	Medical Officer (E.A.)	..	..	1- 4-54
Kadama, Dr. I. S.	..	Medical Officer (E.A.)	..	..	1- 4-54
Muganwa, Dr. P. S. B.	..	Medical Officer (E.A.)	..	..	1- 4-54
Sembeguya, Dr. F. G.	..	Medical Officer (E.A.)	..	..	1- 4-54
Kibaya, Dr. A. K.	..	Medical Officer (E.A.)	..	..	1- 4-54
Kafero, Dr. L. D.	..	Medical Officer (E.A.)	..	..	1- 4-54
Lwanga, Dr. L. W.	..	Medical Officer (E.A.)	..	..	1- 4-54
Musoke, Dr. G. W.	..	Medical Officer (E.A.)	..	..	1- 4-54
Sewali, Dr. G. M.	..	Medical Officer (E.A.)	..	..	1- 4-54
Babumba, Dr. E. M.	..	Medical Officer (E.A.)	..	..	1- 4-54
Bulwa, Dr F. M.	..	Medical Officer (E.A.)	..	..	1- 4-54
Ibanda, Dr. D. F.	..	Medical Officer (E.A.)	..	..	1- 4-54
Musoke, Dr. L. K.	..	Medical Officer (E.A.)	..	..	1- 4-54
Kyalwazi, Dr. S. K.	..	Medical Officer (E.A.)	..	..	1- 4-54
Onyango, Dr. R. J.	..	Medical Officer (E.A.)	..	..	1- 4-54
Odonga, Dr. A. M.	..	Medical Officer (E.A.)	..	..	1- 4-54
Lutalo, Dr. Y. K.	..	Medical Officer (E.A.)	..	..	1- 7-54
Kafuko, Dr. G. W.	..	Medical Officer (E.A.)	..	..	1- 7-54
Kasirye, Dr. W. S.	..	Medical Officer (E.A.)	..	..	17- 9-54
Pandit, Dr. V. B., M.B.E.	..	Medical Officer (E.A.)	..	..	1-12-54
Semambo, Dr. Y.	..	Medical Officer (E.A.)	..	..	1-12-54
Gesa, Dr. H. J.	..	Assistant Medical Officer	..	..	18- 1-54
Lumu, Dr. E. B. S.	..	Assistant Medical Officer	..	..	12- 7-54
Mascarenhas, Mr. A. P. M. C.	..	Assistant Hospital Superintendent	..	..	16-12-54
Alibhai, Miss R. M.	..	Radiographer	..	..	29- 1-54

## DEPARTURES

Board, Dr. A. J.	..	..	Assistant Director of Medical Services ( <i>on leave pending retirement</i> )	..	..	1- 3-54
Wilson, Dr. W. A.	..	..	Senior Medical Officer ( <i>on leave pending retirement</i> )	..	..	5- 5-54
McDonald, Dr. J. A.	..	..	Medical Officer ( <i>on leave pending resignation</i> )	..	..	10- 8-54
Lewis, Dr. (Mrs.) W. M.	..	..	Medical Officer ( <i>retired</i> )	..	..	2- 9-54
O'Donnell, Dr. T. A.	..	..	Medical Officer ( <i>on leave pending resignation</i> )	..	..	22-10-54
Hines, Mr. E. J., M.B.E.	..	..	Chief Health Inspector ( <i>on leave pending retirement</i> )	..	..	1- 8-54
Sneddon, Mr. S. R.	..	..	Health Inspector ( <i>on leave pending resignation</i> )	..	..	13- 3-54
White, Mr. T. A. G.	..	..	Health Inspector ( <i>on leave pending completion of agreement</i> )	..	..	23- 3-54
Davis, Mr. K. C.	..	..	Health Inspector ( <i>on leave pending completion of agreement</i> )	..	..	9- 4-54
Dutton, Mr. R. D. W.	..	..	Health Inspector ( <i>on leave pending resignation</i> )	..	..	14-10-54
Thomas, Mr. T. E.	..	..	Pharmacist ( <i>on leave pending resignation</i> )	..	..	1- 7-54
Skedje, Mr. W. C.	..	..	Storekeeper ( <i>transferred</i> )	..	..	1- 6-54
Atkinson, Mr. H.	..	..	Government Chemist ( <i>on leave pending retirement</i> )	..	..	28- 8-54
Wild, Mr. C. H. J.	..	..	Radiographer ( <i>on leave pending resignation</i> )	..	..	28- 9-54
Lane, Miss E. G.	..	..	Matron, Grade II ( <i>on leave pending retirement</i> )	..	..	23- 9-54
McWilliam, Miss M. L.	..	..	Nursing Sister ( <i>resigned</i> )	..	..	3- 1-54
Garrity, Miss P. D.	..	..	Nursing Sister ( <i>pending termination of appointment</i> )	..	..	31- 1-54

DEPARTURES—*continued*.

McKnight, Miss B.	..	Nursing Sister ( <i>on leave pending resignation</i> )	..	11- 2-54
Lloyd, Miss J. I. J.	..	Nursing Sister ( <i>resigned</i> )	..	1- 3-54
Stoyle, Miss H. M.	..	Nursing Sister ( <i>on leave pending resignation</i> )	..	23- 3-54
Curtis, Miss Z.	..	Nursing Sister ( <i>resigned</i> )	..	1- 6-54
Finnie, Miss V. H.	..	Nursing Sister ( <i>resigned</i> )	..	30- 6-54
Symonds, Miss M. R.	..	Nursing Sister ( <i>resigned</i> )	..	1- 9-54
McIver, Miss M. M.	..	Nursing Sister ( <i>resigned</i> )	..	1-10-54
Cowan, Miss J. M. N.	..	Nursing Sister ( <i>resigned</i> )	..	30-11-54
Winson, Miss G. M.	..	Nursing Sister ( <i>resigned</i> )	..	15-12-54

## APPENDIX V

## ESTABLISHMENT, 1954

*(Sanctioned Establishment and Vacancies)*

## ADMINISTRATION

## EXPATRIATE POSTS

- 1 Director of Medical Services.
- 1 Deputy Director.
- 2 Assistant Directors (1 *vacancy*).
- 7 Senior Medical Officers (2 *vacancies*).
- 1 Administrative Secretary.
- 1 Assistant Establishment Officer (*vacant*).
- 2 Accountants.
- 7 Stenographers (2 *vacancies*).

## "UGANDA CIVIL SERVICE" POSTS

- 2 Chief Clerks (Special Class).

## GENERAL

- 1 Medical Superintendent.
- 2 Specialist Physicians.
- 2 Specialist Surgeons.
- 1 Specialist Ophthalmologist.
- 1 Specialist Gynaecologist.
- 1 Specialist Anaesthetist.
- 1 Specialist Leprologist.
- 54 Medical Officers (9 *vacancies*).
- 1 Hospital Superintendent.
- 7 Assistant Hospital Superintendents (1 *vacancy*).
- 1 Welfare Worker.
- 3 Hospital Assistants.
- 2 Senior Sub-Assistant Surgeons.
- 5 Sub-Assistant Surgeons.
- 56 Medical Officers (East Africa), Senior Assistant Medical Officers, and Assistant Medical Officers (11 *vacancies*).
- 1 Assistant Medical Officer (Blind Physiotherapist).
- 19 Clerks (Executive Class).
- 93 Clerks (General Class).
- 1 Clerk contract plus temporary 10.
- 3 Hospital Cooks.
- 71 Clerical Assistants and Clinical Writers.
- 5 Artisans.
- 1 Mechanic (Lift attendant) (*vacant*).

## NURSING

- 1 Chief Matron.
- 2 Matrons, Grade I.
- 5 Matrons, Grade II.
- 66 Nursing Sisters (13 *vacancies*, 10 filled by temporary appointments).
- 2 Physiotherapists.
- 3 Housekeepers (1 *vacancy*).
- 15 Asian Nurses and Midwives.
- 326 Nurses and Midwives (filled by 125 Midwives, 91 Nurses and 26 Nurse/Midwives).
- 274 Medical Assistants (36 *vacancies*).
- 122 Senior Nursing Orderlies (20 *vacancies*).
- 681 Nursing Orderlies.
- 211 Ward Maids.



## LABORATORY AND ENTOMOLOGICAL

## EXPATRIATE POSTS

- 1 Senior Pathologist.
- 3 Pathologists.
- 2 Government Chemists (1 *vacancy*).
- 3 Senior Entomologists and Entomologists.
- 4 Laboratory Technicians (1 *vacancy*).
- 1 Assistant Bacteriologist.
- 1 Malaria Field Officer.
- 1 Physiological Laboratory Superintendent (seconded for duty at Makerere College).

## "UGANDA CIVIL SERVICE" POSTS

- 1 Laboratory Technician.
- 57 Laboratory Assistants (8 *vacancies*).
- 3 Entomological Assistants.
- 31 Laboratory Orderlies.
- 7 Entomological Observers.
- 1 Chemical Assistant.

## PHARMACEUTICAL

- 1 Chief Pharmacist.
- 4 Pharmacists (1 *vacancy*).
- 2 Storekeepers.

- 1 Assistant Storekeeper (Executive Class).
- 48 Dispensers (6 *vacancies*).
- 1 Clerk (Special Class).
- 15 Assistant Medical Storekeepers (9 *vacancies*).

## RADIOLOGICAL

- 1 Specialist Radiologist (*vacant*).
- 4 Radiographers (1 *vacancy*).
- 1 Receptionist-Secretary (*vacant*).

## HYGIENE

- 1 Chief Health Inspector.
- 20 Senior Health Inspectors and Health Inspectors (5 *vacancies*).
- 2 Sanitary Overseers (1 *vacancy*).
- 1 Instructor of Hygiene.
- 1 Assistant Instructor of Hygiene (*vacant*).

- 99 Assistant Health Inspectors (10 *vacancies*).
- 113 Hygiene Orderlies (19 *vacancies*).
- 61 Health Orderlies.

## DENTAL

- 4 Dental Surgeons.
- 2 Dental Mechanics.

- 3 Dental Orderlies.

## MENTAL HOSPITAL

- 1 Specialist (Alienist).
- 1 Superintendent.
- 4 Male Nurses (1 *vacancy*).
- 1 Sister-in-Charge.
- 1 Female Nurse.

- 19 Male Attendants.
- 14 Female Attendants.
- 78 Male Mental Orderlies.
- 44 Female Mental Orderlies.

## TRANSPORT

- 1 Mechanic.
- 1 Vehicle Mechanic.
- 1 Driver (General Division).
- 42 Drivers (Employees Division ) (5 *vacancies*).

## TRAINING SCHOOLS

- 1 Instructor of Hygiene
- 1 Assistant Instructor of Hygiene
- 2 Medical Officers
- 3 Nursing Sisters
- 1 Health Inspector

Included  
above.

- 209 Learners L.C.S.
- 147 Female nurses in training.

N.B.—All vacancies for European staff are counted at the end of the year. Other grades are counted during the year.

## OUT-PATIENTS ATTENDING GOVERNMENT HOSPITALS, 1954

List No.	Diseases	African	Asian	Euro- pean	Males	Females	TOTAL
1.	Tuberculosis of the respiratory system ..	808	5	2	605	210	815
2.	Other tuberculous diseases	586	6	2	329	265	594
3.	Syphilis .. ..	19,360	4	1	11,324	8,041	19,365
4.	Gonorrhoea .. ..	17,529	18	3	12,716	4,834	17,550
5.	Other venereal diseases ..	4,580	31	3	2,933	1,681	4,614
6.	Fevers not otherwise specified	11,649	205	214	7,740	4,328	12,068
7.	Bacillary dysentery ..	2,721	34	36	2,010	781	2,791
8.	Amoebic dysentery ..	691	21	13	441	284	725
9.	Diphtheria .. ..	2	3	3	7	1	8
10.	Whooping cough ..	2,042	27	3	1,064	1,008	2,072
11.	Meningitis (except Tuberculous) .. ..	28	—	—	28	—	28
12.	Plague .. ..	—	—	—	—	—	—
13.	Leprosy .. ..	740	—	—	358	382	740
14.	Tetanus .. ..	8	—	—	4	4	8
15.	Anthrax .. ..	2	1	—	2	1	3
16.	Acute poliomyelitis ..	1	1	—	1	1	2
17.	Smallpox—						
	(a) Variola major ..	—	—	1	1	—	1
	(b) Variola minor ..	9	3	—	9	3	12
18.	Measles .. ..	533	33	3	356	213	569
19.	Mumps .. ..	354	12	4	243	127	370
20.	Malaria—						
	(a) Benign tertian (vivax)	68	63	10	103	38	141
	(b) Quartan (malaria) ..	162	4	5	106	65	171
	(c) Malignant tertian (falsparva) ..	25,633	515	103	16,440	9,811	26,251
	(d) Other unspecified malaria .. ..	60,133	1,215	110	38,942	22,516	61,458
21.	Blackwater fever ..	23	2	1	4	22	26
22.	Schistosomiasis—						
	(a) Vesical .. ..	19	1	—	20	—	20
	(b) Intestinal .. ..	877	—	—	487	390	877
23.	Onchocerciasis .. ..	439	6	—	309	136	445
24.	Ankylostomiasis .. ..	6,106	15	—	3,573	2,548	6,121
25.	Guinea worm .. ..	335	—	—	262	73	335
26.	Other helminthic diseases ..	7,331	35	30	4,864	2,532	7,396
27.	Relapsing fever .. ..	13	—	—	7	6	13
28.	Yaws .. ..	14,192	3	—	8,814	5,381	14,195
29.	Chicken pox .. ..	1,027	16	19	702	360	1,062
30.	Trachoma .. ..	4,675	47	4	2,557	2,169	4,726
31.	Other diseases of eye and annexa (except Ophthalmia neonatorum) ..	22,890	209	73	15,665	7,507	23,172
32.	Trypanosomiasis—						
	(a) T. gambiense ..	—	—	5	3	2	5
	(b) T. rhodesiense ..	—	—	2	—	2	2
	(c) Unspecified ..	2	—	—	1	1	2
33.	Tinea .. ..	934	13	15	642	320	962
34.	Scabies .. ..	6,067	27	—	4,025	2,069	6,094
35.	Cancer and other tumours—						
	(a) Malignant including leukaemia ..	96	1	1	51	47	98
	(b) Benign and unspecified	276	9	6	122	169	291
36.	Asthma .. ..	674	146	20	606	234	840
37.	Diabetes .. ..	14	23	6	38	5	43
38.	Vitamin deficiency states ..	393	28	—	213	208	421
39.	Diseases of blood and blood forming organs ..	3,557	104	36	1,611	2,086	3,697
40.	Cerebral vascular lesions ..	6	3	1	7	3	10
41.	Mental disorders ..	108	6	7	85	36	121
42.	Epilepsy .. ..	135	1	—	92	44	136
43.	Other diseases of nervous system .. ..	2,336	144	129	1,779	830	2,609



List No.	Diseases	African	Asian	Euro- pean	Males	Females	TOTAL
44.	Disease inflammatory of ear and mastoid sinus ..	7,805	145	157	5,212	2,895	8,107
45.	Diseases of the circulatory system—						
	(a) Heart disease ..	311	11	3	202	123	325
	(b) Other circulatory diseases ..	390	43	36	275	194	469
46.	Pneumonia—						
	(a) Lobar pneumonia ..	436	12	3	314	137	451
	(b) Bronchopneumonia ..	434	23	4	286	175	461
47.	Other diseases of respiratory system ..	70,072	1,914	836	48,367	24,455	72,822
48.	Diseases of teeth and gums—						
	(a) Caries ..	13,025	147	37	8,319	4,890	13,209
	(b) Other conditions ..	12,665	103	48	6,259	6,557	12,816
49.	Appendicitis ..	2	5	15	8	14	22
50.	Intestinal obstruction and hernia ..	2,450	8	9	2,080	387	2,467
51.	Gastro-enteritis (over 4 weeks old) ..	9,718	135	237	6,436	3,654	10,090
52.	Cirrhosis of the liver ..	59	1	—	41	19	60
53.	Other diseases of liver and bile passages ..	80	31	12	79	44	123
54.	Other diseases of digestive system ..	46,220	557	341	28,191	18,927	47,118
55.	Nephritis ..	322	21	2	248	97	345
56.	Hydrocele ..	614	2	—	616	—	616
57.	Other diseases of genito-urinary system ..	5,696	150	95	2,704	3,237	5,941
58.	Diseases of pregnancy, child birth, and the puerperal state—						
	(a) Abortion ..	137	16	11	—	164	164
	(b) Toxaemias of pregnancy ..	5	9	—	—	14	14
	(c) Other conditions ..	412	46	39	—	497	497
59.	Arthritis and rheumatism ..	18,934	114	69	13,495	5,622	19,117
60.	Chronic ulcer of leg ..	18,106	25	44	13,968	4,207	18,175
61.	(a) Other diseases of skin ..	23,815	496	417	16,532	8,196	24,728
	(b) Other diseases of musculo-skeletal system ..	9,830	254	145	7,582	2,647	10,229
62.	Congenital malformations and diseases of early infancy—						
	(a) Diarrhoea of new-born ..	2,144	12	3	1,359	800	2,159
	(b) Ophthalmia neonatorum ..	54	—	2	28	28	56
	(c) Immaturity ..	119	1	—	79	41	120
	(d) All other malformations and diseases of early infancy ..	732	19	3	411	343	754
63.	Fractures and dislocations, except where classifiable under item (64) ..	2,129	53	68	1,834	416	2,250
64.	Injuries by animals or insects ..	1,982	38	126	1,502	644	2,146
65.	Other wounds and superficial injuries (excluding burns) ..	49,066	630	342	40,173	9,865	50,038
66.	Effects of foreign bodies ..	1,898	31	17	1,281	665	1,946
67.	Burns and scalds ..	4,314	59	12	2,838	1,547	4,385
68.	Poisoning ..	75	6	1	50	32	82
69.	All other injuries from external causes ..	15,624	115	102	11,502	4,339	15,841
70.	(a) Ill-defined conditions ..	20,405	282	1,135	13,623	8,199	21,822
	(b) Examinations and prophylactic injections ..	89,562	3,795	2,258	46,003	49,612	95,615
	TOTAL ..	649,806	12,349	7,500	424,197	245,458	669,655

## IN-PATIENTS AT GOVERNMENT HOSPITALS, 1954

Inter-national List No.	DISEASES	PATIENTS					DEATHS			
		African	Asian	Euro- pean	Male	Female	TOTAL	Male	Female	TOTAL
A 1	Tuberculosis of respiratory system .. .. .	528	18	5	384	167	551	52	22	74
A 2	Tuberculosis of meninges and central nervous system ..	16	4	—	11	9	20	4	3	7
A 3	Tuberculosis of intestines, peritoneum and mesenteric glands .. .. .	14	2	—	11	5	16	2	—	2
A 4	Tuberculosis of bones and joints .. .. .	61	1	—	41	21	62	5	1	6
A 5	Tuberculosis, all other forms .. .. .	49	1	—	37	13	50	3	1	4
A 6	Congenital syphilis .. .. .	144	—	—	82	62	144	6	7	13
A 7	Early syphilis (I and II) .. .. .	401	1	—	236	166	402	2	2	4
A 8	Tabes dorsalis .. .. .	3	—	—	1	2	3	1	—	1
A 9	General paralysis of insane .. .. .	20	—	—	16	4	20	2	—	2
A 10	All other syphilis .. .. .	149	6	1	98	58	156	4	—	4
A 11	Gonococcal infections— (a) Genito-urinary .. .. . (b) Ophthalmic .. .. . (c) Other forms .. .. .	1,607 45 182	2 — —	2 — —	1,077 27 120	534 18 62	1,611 45 182	23 — 7	3 — 3	26 — 10
A 12	Typhoid fever .. .. .	557	16	3	385	191	576	45	8	53
A 13	Paratyphoid fever and other Salmonella infections ..	28	2	13	26	17	43	—	—	—
A 14	Cholera .. .. .	—	—	—	—	—	—	—	—	—
A 15	Brucellosis (undulant fever) .. .. .	29	—	1	17	13	30	1	2	3
A 16	(a) Bacillary dysentery .. .. . (b) Amoebiasis (excluding symptomless cyst carriers) (c) Other unspecified forms of dysentery .. .. .	888 238 249	13 1 5	4 12 13	623 160 160	282 91 107	905 250 267	13 1 4	8 — 3	21 1 7
A 17	Scarlet fever .. .. .	1	—	1	2	—	2	1	—	1
A 18	Streptococcal sore throat .. .. .	41	—	6	26	21	47	2	—	2
A 19	Erysipelas .. .. .	5	—	—	3	2	5	—	—	—
A 20	Septicaemia and pyaemia .. .. .	42	—	—	26	16	42	7	6	13
A 21	Diphtheria .. .. .	6	11	1	10	8	18	2	1	3
A 22	Whooping cough .. .. .	646	1	—	237	410	647	11	11	22
A 23	Meningococcal infections .. .. .	42	—	—	25	17	42	10	4	14
A 24	Plague .. .. .	—	—	—	—	—	—	—	—	—
A 25	Leprosy .. .. .	52	—	—	43	9	52	3	—	3



APPENDIX VI (B)—continued

Inter-national List No.	DISEASES	PATIENTS						DEATHS		
		African	Asian	Euro-pean	Male	Female	TOTAL	Male	Female	TOTAL
A 26	Tetanus...	81	—	—	60	21	81	27	9	36
A 27	Anthrax...	12	—	—	8	4	12	1	2	3
A 28	Acute poliomyelitis	23	3	5	20	11	31	2	1	3
A 29	Acute infectious encephalitis	15	1	5	12	9	21	2	1	3
A 30	Late effects of acute poliomyelitis and acute infectious encephalitis	3	6	2	8	3	11	—	1	1
A 31	Smallpox— (a) Variola major (b) Variola minor	—	—	—	—	—	—	—	—	—
A 32	Measles	29	2	1	23	6	29	—	—	—
A 33	Yellow fever	392	—	—	214	181	395	—	2	2
A 34	Infectious hepatitis	—	—	—	—	—	—	—	—	—
A 35	Rabies	122	1	11	88	46	131	7	4	11
A 36	(a) Louse-borne (epidemic) typhus (b) Flea-borne (murine) typhus (c) Tick-borne typhus (d) Unspecified typhus (e) Other rickettsial diseases	—	—	—	—	—	—	—	—	—
A 37	(a) Vivax malaria (benign tertian) (b) Malariae malaria (quartan) (c) Falciparum malaria (malignant tertian) (d) Other unspecified malaria (e) Blackwater fever	7 62 1 11 —	— — — — —	— — 15 — —	6 46 13 7 1	1 16 3 4 —	7 62 16 11 1	— 1 — — —	1 — — — —	1 — — — —
A 38	Schistosomiasis— (a) Vesical (b) Intestinal Hydatid disease (a) Onchocerciasis (b) Loiasis (c) Filariasis (bancrofti) (d) Other filariasis Ankylostomiasis	80 242 5,217 3,726 9 63 160 — 154 — 1 6 2,641	8 17 30 39 2 — — — 1 — — — 2	22 — 117 7 — 1 — — 1 — — 1 1	86 135 2,894 2,158 9 56 93 — 112 — 1 6 1,047	24 124 2,470 1,614 2 8 67 — 44 — 1 1 1,597	110 259 5,364 3,772 11 64 160 — 156 — 2 7 2,644	2 1 108 37 2 — 1 — — — — — 2	— 1 75 34 1 — 1 — — — — 5	2 2 183 71 3 — 2 — — — — 7

Inter-national List No.	DISEASES	PATIENTS					DEATHS			
		African	Asian	Euro-pean	Male	Female	TOTAL	Male	Female	TOTAL
A 42	(a) Tapeworm .. .. .	385	—	7	268	124	392	—	—	—
	(b) Ascaris .. .. .	275	1	—	137	139	276	1	—	1
	(c) Guinea worm .. .. .	92	—	—	60	37	97	1	—	1
	(d) Other helminths .. .. .	83	1	1	55	30	85	—	—	—
A 43	(a) Lymphogranuloma venereum .. .. .	75	—	—	23	52	75	2	2	4
	(b) Granuloma inguinale, venereal .. .. .	62	1	—	51	12	63	—	1	1
	(c) Other and unspecified venereal diseases .. .. .	124	—	1	76	49	125	—	1	1
	(d) Food poisoning infection and intoxication (excluding Salmonella infections) .. .. .	6	—	—	5	1	6	1	—	1
	(e) Relapsing fever .. .. .	63	—	—	49	14	63	2	—	2
	(f) Leptospirosis (Weil's disease) .. .. .	3	—	—	3	—	3	—	—	—
	(g) Yaws .. .. .	240	1	—	141	100	241	—	—	—
	(h) Chickenpox .. .. .	474	—	—	329	145	474	—	—	—
	(i) Dengue .. .. .	5	—	—	4	1	5	—	—	—
	(j) Trachoma .. .. .	1,469	1	—	549	921	1,470	—	—	—
	(k) Sandfly fever .. .. .	—	—	—	—	—	—	—	—	—
	(l) Leishmaniasis .. .. .	—	—	—	—	—	—	—	—	—
	(m) Trypanosomiasis— (i) T. gambiense .. .. .	1	—	—	1	—	1	—	—	—
	(ii) T. rhodesiense .. .. .	23	—	—	18	5	23	—	—	—
	(iii) Unspecified .. .. .	8	—	—	8	—	8	2	—	2
	(n) Tinea .. .. .	30	—	1	26	5	31	—	—	—
	(o) Scabies .. .. .	55	—	—	35	20	55	—	—	—
	(p) All other parasitic diseases .. .. .	53	—	—	33	20	53	1	1	2
	Malignant neoplasm of— buccal cavity and pharynx .. .. .	2	—	—	—	2	2	—	—	—
A 44	oesophagus .. .. .	10	—	—	8	2	10	3	2	5
A 45	stomach .. .. .	18	1	2	11	10	21	4	2	6
A 46	intestine, except rectum .. .. .	4	—	—	3	1	4	1	—	1
A 47	rectum .. .. .	10	2	—	7	5	12	2	3	5
A 48	larynx .. .. .	1	—	—	1	—	1	1	—	1
A 49	trachea, and of bronchus and lung not specified as secondary .. .. .	2	3	—	4	1	5	2	—	2



APPENDIX VI (B)—continued

Inter-national List No.	DISEASES	PATIENTS						DEATHS		
		African	Asian	Euro-pean	Male	Female	TOTAL	Male	Female	TOTAL
A 51	Malignant neoplasm of— breast .. .. .	9	1	—	1	9	10	—	1	1
A 52	cervix uteri .. .. .	43	2	1	—	46	46	—	1	1
A 53	other and unspecified parts of uterus .. .. .	23	1	—	—	24	24	—	—	—
A 54	(a) prostate .. .. .	13	1	—	14	—	14	3	—	3
	(b) penis .. .. .	48	—	—	48	—	48	1	—	1
A 55	skin .. .. .	54	—	2	38	18	56	—	—	—
A 56	bone and connective tissue .. .. .	48	3	—	29	22	51	—	2	2
A 57	other unspecified sites .. .. .	119	—	1	85	35	120	19	5	24
A 58	Leukaemia and aleukaemia .. .. .	13	1	1	8	7	15	1	3	4
A 59	Neoplasms of lymphatic and haematopoietic system .. .. .	22	—	—	16	6	29	5	—	5
A 60	Benign and unspecified neoplasms .. .. .	671	5	9	100	585	685	3	3	6
A 61	Nontoxic goitre .. .. .	8	—	1	1	8	9	—	—	—
A 62	Thyrototoxicosis with or without goitre .. .. .	1	—	4	—	5	5	—	—	—
A 63	Diabetes mellitus .. .. .	55	26	2	51	32	83	4	3	7
A 64	(a) Beriberi .. .. .	—	1	1	1	1	2	—	—	—
	(b) Pellagra .. .. .	3	—	—	2	1	3	—	—	—
	(c) Scurvy .. .. .	1	—	—	1	—	1	—	—	—
	(d) Kwashiorkor .. .. .	278	—	—	152	126	278	18	8	26
	(e) Other deficiency states .. .. .	151	—	—	70	81	151	10	4	14
A 65	(a) Hyperchromic anaemias .. .. .	4	—	2	2	4	6	—	—	—
	(b) Hypochromic anaemias .. .. .	214	2	—	98	118	216	5	10	15
	(c) Other unspecified anaemias .. .. .	287	13	1	107	194	301	16	15	31
A 66	(a) Asthma .. .. .	239	23	3	188	77	265	—	1	1
	(b) All other allergic disorders, endocrine, metabolic and blood diseases .. .. .	156	11	19	127	59	186	9	1	10
A 67	Psychoses .. .. .	57	5	4	43	23	66	—	—	—
A 68	Psychoneuroses and disorders of personality .. .. .	56	4	23	49	34	83	—	—	—
A 69	Mental deficiency .. .. .	28	—	—	17	11	28	1	—	1
A 70	Vascular lesions affecting central nervous system .. .. .	81	1	6	58	30	88	11	5	16
A 71	Meningitis (except meningococcal and tuberculous) .. .. .	135	2	—	78	59	137	30	21	51
A 72	Disseminated sclerosis .. .. .	3	1	1	2	3	5	—	—	—
A 73	Epilepsy .. .. .	76	—	—	49	27	76	2	2	4
A 74	Inflammatory diseases of eye .. .. .	422	2	4	271	157	428	5	2	7

Inter-national List No.	DISEASES	PATIENTS					DEATHS		
		African	Asian	Euro-pean	Male	Female	Male	Female	TOTAL
A 75	Cataract .. .. .	127	48	—	126	49	1	—	175
A 76	Glaucoma .. .. .	29	16	—	30	15	1	—	45
A 77	(a) Otitis externa .. .. .	29	—	—	15	14	1	1	29
	(b) Otitis media and mastoiditis .. .. .	242	8	4	156	98	1	—	254
	(c) Other inflammatory diseases of ear .. .. .	40	1	—	29	12	—	—	41
A 78	(a) All other diseases and conditions of eye .. .. .	779	29	6	526	288	—	—	814
	(b) All other diseases of the nervous system and sense organs .. .. .	95	4	5	84	20	9	2	104
A 79	Rheumatic fever .. .. .	27	5	—	24	8	3	1	32
A 80	Chronic rheumatic heart disease .. .. .	22	5	—	20	7	4	—	27
A 81	Arteriosclerotic and degenerative heart disease .. .. .	15	7	1	19	4	1	—	23
A 82	(a) Disease of heart or aorta .. .. .	84	—	—	66	18	17	1	84
	(b) Other diseases of heart .. .. .	226	5	2	140	93	40	23	233
A 83	Hypertension with heart disease .. .. .	19	26	5	35	15	3	1	50
A 84	Hypertension without mention of heart .. .. .	7	6	4	12	5	—	1	17
A 85	Diseases of arteries .. .. .	11	1	5	14	3	3	1	17
A 86	Other diseases of circulatory system .. .. .	136	1	9	122	24	4	2	146
A 87	Acute upper respiratory infections .. .. .	1,510	3	32	882	665	14	1	1,545
A 88	Influenza .. .. .	48	4	4	29	27	—	1	56
A 89	Lobar pneumonia .. .. .	2,137	17	7	1,463	698	68	44	2,161
A 90	Bronchopneumonia .. .. .	1,483	13	6	811	691	63	63	1,502
A 91	Primary atypical, other and unspecified pneumonia .. .. .	304	—	—	227	77	6	3	304
A 92	Acute bronchitis .. .. .	727	5	6	398	340	2	4	738
A 93	Bronchitis, chronic and unqualified .. .. .	234	7	3	167	77	—	1	244
A 94	Hypertrophy of tonsils and adenoids .. .. .	218	20	53	149	142	1	1	291
A 95	Empyema and abscess of lung .. .. .	39	—	—	36	3	3	2	39
A 96	Pleurisy .. .. .	52	1	3	39	17	—	—	56
A 97	(a) Pneumoconiosis .. .. .	8	—	1	5	4	—	—	9
	(b) All other respiratory diseases .. .. .	135	4	2	84	57	2	3	141
A 98	(a) Dental caries .. .. .	129	—	13	94	48	1	—	142
	(b) All other diseases of teeth and gums .. .. .	154	15	5	94	80	2	1	174
A 99	Ulcer of stomach .. .. .	62	5	11	67	11	1	—	78
A 100	Ulcer of duodenum .. .. .	65	5	13	76	7	9	—	83



APPENDIX VI (B)—continued

Inter-national List No.	DISEASES	PATIENTS						DEATHS		
		African	Asian	Euro-pean	Male	Female	TOTAL	Male	Female	TOTAL
A 101	Gastritis and duodenitis .. .. .	61	16	8	61	24	85	5	—	5
A 102	Appendicitis .. .. .	30	52	54	99	37	136	—	—	—
A 103	Intestinal obstruction and hernia .. .. .	2,196	32	18	1,816	430	2,246	134	34	168
A 104	(a) Gastro-enteritis and colitis (4 weeks and over) (b) Chronic enteritis and ulcerative colitis .. .. .	470	12	9	248	243	491	17	23	40
A 105	Cirrhosis of liver .. .. .	91	3	21	61	54	115	4	2	6
A 106	Cholelithiasis and cholecystitis .. .. .	176	3	3	137	45	182	33	5	38
A 107	Other diseases of digestive system .. .. .	19	7	3	19	10	29	4	1	5
A 108	Acute nephritis .. .. .	839	36	13	555	333	888	33	9	42
A 109	Chronic, other and unspecified nephritis .. .. .	120	3	5	68	60	128	7	1	8
A 110	Infections of kidney .. .. .	134	4	2	95	45	140	15	4	19
A 111	Calculi of urinary system .. .. .	46	12	12	33	37	70	6	1	7
A 112	Hyperplasia of prostate .. .. .	3	9	8	17	3	20	—	—	—
A 113	Diseases of breast .. .. .	47	—	1	48	—	48	6	—	6
A 114	(a) Hydrocele .. .. . (b) Disorders of menstruation .. .. . (c) All other diseases of the genito-urinary system .. .. .	91 322 167	3 4 61	1 — 78	2 326 —	93 — 306	95 326 306	— — —	— — —	— — —
A 115	Sepsis of pregnancy, childbirth and the puerperium .. .. .	2,148	83	62	809	1,484	2,293	26	8	34
A 116	Toxaemias of pregnancy and the puerperium .. .. .	113	5	—	—	118	118	—	2	2
A 117	Haemorrhage of pregnancy and childbirth .. .. .	82	13	1	—	96	96	—	4	4
A 118	Abortion without mention of sepsis or toxæmia .. .. .	209	7	—	—	216	216	—	6	6
A 119	Abortion with sepsis .. .. .	1,037	84	24	—	1,145	1,145	—	6	6
A 120	(a) Other complications of pregnancy, childbirth and the puerperium .. .. . (b) Delivery without complications .. .. . (c) Infections of skin and subcutaneous tissue .. .. .	178 2,035 6,547	2 51 712	— 36 136	— — —	180 2,122 7,395	180 2,122 7,395	— — —	10 94 7	10 94 7
A 121	Arthritis and spondylitis .. .. .	1,695	12	29	1,004	732	1,736	7	7	14
A 122	Muscular rheumatism unspecified .. .. .	349	7	7	273	90	363	—	—	—
A 123	Osteomyelitis and periostitis .. .. .	168	1	3	123	49	172	1	1	2
A 124	Ankylosis and acquired musculo-skeletal deformities .. .. .	170	5	—	127	48	175	1	1	2
A 125	(a) Chronic ulcer of leg .. .. .	90	11	3	62	42	104	—	—	—
A 126	(b) All other diseases of skin .. .. . (c) All other diseases of musculo-skeletal system .. .. .	1,325 851 565	5 24 6	3 6 3	939 572 407	394 309 167	1,333 881 574	— 2 7	1 1 —	1 3 7

Inter-national List No.	DISEASES	PATIENTS					DEATHS	
		African	Asian	Euro-pean	Male	Female	TOTAL	TOTAL
A 127	Congenital malformations—	12	2	—	10	4	14	2
A 128	spina bifida and meningocele	10	—	1	3	8	11	—
A 129	circulatory system	36	—	1	20	17	37	6
A 130	all others	40	1	—	16	25	41	10
A 131	Birth injuries	56	—	—	32	24	56	29
	Diseases of newborn (under 4 weeks)—	90	2	16	56	52	108	9
A 132	asphyxia and atelectasis	30	—	1	13	18	31	—
	(a) Diarrhoea	31	1	2	15	19	34	5
	(b) Ophthalmia	19	3	—	12	10	22	—
	(c) Other infections	58	2	—	32	28	60	5
A 133	Haemolytic disease	233	3	1	110	127	237	5
A 134	Other defined diseases	56	1	4	39	22	61	5
A 135	Ill-defined diseases and immaturity	1,332	46	47	816	609	1,425	13
A 136	Senility without mention of psychosis	3,496	154	17	1,607	2,060	3,667	8
A 137	(a) Pyrexia of unknown origin	2,726	32	12	1,376	1,394	2,770	37
	(b) Observation, without need for further medical care	241	11	6	220	38	258	2
	(c) All other ill-defined causes of morbidity	174	—	7	159	22	181	41
AN 138	Fracture of skull	1,305	70	29	1,079	325	1,404	26
AN 139	Fracture of spine and trunk	167	4	2	131	42	173	39
AN 140	Fracture of limbs	186	—	29	178	37	215	37
AN 141	Dislocation without fracture	444	10	6	401	59	460	14
AN 142	Sprains and strains of joints and adjacent muscle	237	3	1	196	45	241	12
AN 143	Head injury (excluding fracture)	3,217	51	18	2,598	688	3,286	1
AN 144	Internal injury of chest, abdomen and pelvis	1,185	16	23	896	328	1,224	2
AN 145	Laceration and open wounds	120	—	5	73	53	125	36
AN 146	Superficial injury, contusion and crushing with intact skin surface	888	30	2	557	363	920	14
AN 147	Effects of foreign body entering through orifice	205	4	5	127	87	214	15
AN 148	Burns and scalds	515	—	23	456	82	538	5
AN 149	Effects of poisons							3
AN 150	All other and unspecified effects of external causes							—
	TOTAL	74,672	2,306	1,354	41,168	37,164	78,332	2,286



## CAUSES OF DEATH OF NON-NATIVES, 1954

## APPENDIX VI (C)

Inter-national List No.	Disease	DEATHS REGISTERED DURING 1954											DEATHS IN HOSPITAL				
		Race						Age					Sex		TOTAL	Euro-pean	Asian
		Euro-pean	Indian	Goan	Arab	Other	0-	1-	5-	15-	45-	65-	M	F			
A 1	Tuberculosis of respiratory system	—	1	—	—	—	—	—	—	1	—	—	1	—	1	—	—
A 2	Tuberculosis of meninges and central nervous system	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1
A 16	Dysentery ..	—	1	—	—	—	—	—	—	—	—	—	—	—	1	—	1
A 28	Acute poliomyelitis ..	1	1	—	—	—	—	—	—	1	—	—	2	—	2	—	1
A 29	Acute infectious encephalitis	—	2	—	—	—	—	—	—	—	—	—	—	2	2	—	2
A 37	Malaria, all types ..	1	42	3	1	2	13	15	5	11	4	1	29	20	49	1	—
A 46	Malignant neoplasm of—																
A 46	Stomach ..	1	—	—	—	—	—	—	—	—	1	—	1	—	1	—	—
A 47	Intestine except rectum	—	—	—	1	—	—	—	—	—	1	—	1	—	1	—	—
A 57	Other unspecified sites	—	1	1	—	—	—	—	—	1	—	—	1	1	2	—	1
A 58	Leukaemia and aleukaemia	—	1	—	—	—	—	1	—	—	—	—	1	—	1	—	—
A 63	Diabetes mellitus ..	1	2	—	—	1	—	—	—	2	—	2	4	—	4	—	3
A 65	Anaemia, all types ..	—	5	1	—	—	1	—	—	4	—	2	2	1	3	—	—
A 66	Asthma ..	—	3	—	—	—	—	—	—	1	—	—	—	—	—	—	—
A 70	Vascular lesions affecting central nervous system	—	4	1	1	1	—	—	—	3	1	3	5	2	7	—	4
A 79	Rheumatic fever ..	—	1	—	—	—	—	—	1	—	—	—	—	1	1	—	—
A 81	Arteriosclerotic and degenerative heart disease ..	1	25	3	—	—	1	1	—	3	14	10	27	2	29	—	2
A 82	Other disease of heart ..	—	3	—	—	—	—	—	—	2	1	—	2	1	3	—	2
A 83	Hypertension with heart disease ..	—	2	—	—	—	—	—	—	—	2	—	1	1	2	—	—
A 86	Other diseases of circulatory system	3	37	—	1	2	4	4	4	8	14	9	25	18	43	1	10
A 87	Acute upper respiratory infection ..	—	1	—	1	—	—	1	—	1	—	—	1	1	2	1	1
A 89	Lobar pneumonia ..	1	1	—	1	—	—	3	2	—	1	—	2	1	3	—	2
A 90	Bronchopneumonia ..	—	14	—	—	—	7	—	1	1	2	—	9	5	14	—	—
A 91	Primary, atypical, other and unspecified pneumonia ..	1	9	1	1	—	6	2	2	2	—	—	5	7	12	1	4
A 93	Bronchitis, chronic and unqualified	1	—	1	—	—	—	—	—	—	—	1	1	—	1	—	—
A 97	All other respiratory disease	1	3	—	—	—	3	—	—	—	1	—	2	3	5	2	—
A 99	Gastric ulcer ..	—	—	—	—	—	2	—	—	—	—	—	—	—	—	—	—
A 101	Gastritis and duodenitis	—	2	—	—	—	—	—	—	—	—	—	1	1	2	—	1
A 103	Intestinal obstruction and hernia ..	1	1	—	—	—	—	—	—	1	—	—	1	1	2	—	—
A 104	Gastro-enteritis and colitis ..	—	7	—	—	—	3	3	—	—	1	—	4	3	7	—	6

Inter-national List No.			Disease	DEATHS REGISTERED DURING 1954												DEATHS IN HOSPITAL		
				Race					Age					Sex		Euro-pean	Asian	
				Euro-pean	Indian	Goan	Arab	Other	0-	1-	5-	15-	45-	65-	M			F
A 105			Cirrhosis of liver	—	2	—	—	—	—	—	1	—	—	2	—	—	2	2
A 106			Cholelithiasis and cholecystitis	—	1	—	—	—	—	—	—	—	—	1	1	—	1	1
A 107			Other diseases of digestive system	—	1	—	1	—	—	—	1	—	—	2	—	—	2	2
A 109			Chronic and other unspecified nephritis	—	2	—	—	—	—	—	—	—	—	2	—	—	2	2
A 110			Infections of kidney	1	1	—	—	—	—	—	—	—	2	2	—	1	—	—
A 114			All other diseases of genito-urinary system	—	1	—	—	—	—	—	—	—	1	1	—	—	—	—
A 116			Toxaemia of pregnancy and the puerperium	—	2	—	—	—	—	—	1	—	—	2	2	—	1	1
A 117			Haemorrhage of pregnancy and childbirth	—	4	—	—	—	—	—	4	—	—	—	4	—	—	2
A 120			Other complications of pregnancy, childbirth and puerperium	—	1	—	—	—	—	—	1	—	—	—	1	—	1	1
A 123			Muscular rheumatism unspecified	—	1	—	—	—	—	—	—	1	—	—	1	—	—	—
A 129			Congenital malformations—all others	—	1	—	—	—	—	—	—	—	—	1	—	—	—	1
A 131			Diseases of newborn (under 4 weeks) asphyxia and atelectasis	—	3	1	—	—	—	1	—	—	—	2	2	—	4	2
A 133			Haemolytic disease	—	1	—	—	—	—	—	1	—	—	—	1	—	1	1
A 134			Other defined diseases	2	—	—	—	—	—	—	—	—	1	1	1	—	2	2
A 135			Immaturity and other ill-defined disease of newborn	—	11	—	—	2	—	—	—	—	—	7	6	2	13	7
A 137			All other ill-defined causes of morbidity	1	8	1	2	—	3	1	1	3	1	7	5	1	12	2
A 145			Lacerations and open wounds	—	2	—	—	—	—	—	2	—	—	2	—	—	2	1
AN 140			Fractured neck of femur	—	—	—	—	1	—	—	—	—	1	1	—	1	1	—
AN 148			Burns and scalds	—	9	—	—	—	—	1	6	1	—	1	8	—	9	7
AN 150			All other and unspecified effects of external causes	1	4	—	—	—	—	2	1	2	—	5	—	—	5	1
AE 138			Motor vehicle accidents	4	8	—	—	—	2	—	7	2	1	11	1	2	12	6
AE 145			Accident by firearm	2	1	—	—	—	1	—	1	—	1	3	—	1	3	—
AE 147			All other accidents	—	—	—	—	1	—	—	1	—	—	1	—	—	1	—
			TOTAL	24	234	13	10	10	62	40	23	71	57	38	182	109	291	81









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*Printed by the  
Government Printer, P.O. Box 33,  
Entebbe, Uganda  
1955*

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